

Yours  
Herr  
Cold as November  
rainy, breeze  
quiet level.  
Red card

sent a card  
Cordological  
Wm. H. H. H.  
fly.  
mills

Wm. H. H. H.  
a

Liberty

Oct 11, to Apr 9, '83

Oct 11, '83



Feb 11, Wednesday sup Cold as November 1.  
Last pt. of last week very rainy, being  
risen up to about its August level.  
No more claims this year. Rec'd card  
from Abell. a while ago, and sent a card  
in return, asking how to send Shu's case.  
He replies "by freight." rather laconically.  
Sunday I washed up a lot of shells  
for him. would pack tonight, but  
must wait till pra brings home a  
small barrel. Also got a letter  
from W.H. Hansen, better than his







Oct 13, Friday. Today am at  
 home rather played out with  
 indulgence in my previous day's  
 indulgence in hotel guests. I'm  
 looking over the flypaper & it seems  
 they seem to pull in these places.

(1) Cedar lip toothless. Anubian calculating  
 all solid, pointed tooth mostly v-shaped.  
 (Florida group) 3.4 1/2 1/2 1/2

(2) Cedar lip with two teeth. Anubian  
 a small incisor with small  
 tooth a small incisor, 1.0 1.0 1.0  
 3.4 1/2 1/2 1/2

(3) Cedar lip with two teeth. Anubian  
 (Florida group) 3.4 1/2 1/2 1/2

(4) Teeth of lip resemble two pointed  
 pointed with white, yellow, & green  
 with a small incisor, 1.0 1.0 1.0  
 3.4 1/2 1/2 1/2

(5) Cedar lip with two teeth. Anubian  
 (Florida group) 3.4 1/2 1/2 1/2

Probably D. pectus, musculus and  
corresponding, may form a group  
distinct from very large group (a) in  
section. Its characters are:

- (a) Lip with two, marginal. Its teeth  
not in similar as in group  
(a) and (aa), but simply per-  
forated, or undifferentiated.  
Type, Polygona pectus, etc.

If such shells as musculus are to be in-  
cluded, Texanina, etc. should also be  
placed here. In this case, the  
characters of the groups given  
above would not apply, and  
the diagnosis should be substituted

- (aa) Lip with two, lamellae simply perforate in  
a similar position. Radial fold  
connected with upper transverse fold  
in Texanina has an elevated lamina





Oct 16, Monday evg. -- Yesterday  
I packed up A.W.'s lot of  
Unionidae. I decided on  
that "half-barrel" we had ordered  
in, as the best & most available  
refuge, and began by putting  
about  $1\frac{1}{2}$  jacks of U. ligatus &  
U. albus in; also about a dozen  
more U. rostratus, U. cornutus, U. stans,  
U. occidentalis, U. pustulosus, U. luteolus, U. elongatus,  
U. pseudostans, U. planus, U. undulatus?)  
U. maynensis, U. grandis (from the  
Furber Coppard), 80 or so U. fragrans,  
5 quite juv. & juveniles in pond  
(near pond by Chas. May) 2 U. albus,  
U. ovalis or U. edentata? (think U. edentata), some  
U. rostratus, 1 "Barren"? 1 U. rostratus - in!  
High on Aug. 13 '82) 10 U. albus in

a dozen or so dead salmon; 1 glass with  
pink or colored water.

25 (1850) *lygmaeum* (also some white)

6 " *scabrous*

2 " *fragrans* - 54 solid

62 " *elegans* some *subglacialis* -

50 " *rectus* - dark purple

(100 - *lucida* - 10 June 11, 1850)

*P. subulare*, a large *lucida*, *subul.*

*lucida* as *lucida* *subul.* *subul.*

*lucida* *subul.*

(*lucida* *subul.*)

Many quercus in box above

as to *lucida*

(*lucida* *subul.*)

*lucida*

sent to the

specimen figured in Aug 13, 1850

After filling the old I got  
in and stood upon  
them! These put in  
another layer.

Pa took it down to copper  
to be "beaded up". Will ship  
tomorrow. ~~With~~

---

I haven't made any snow about  
River for 2 weeks or so. Sunday  
Morn last, I started it was low & warm  
it continued to go lower for some  
half of the following week, then  
rose rapidly but got of dead  
low - it was all but over  
over 1 p.m. the house & now  
was falling a little 1 p.m.



Oct 19, Thursday - Have been  
over to Foreman since Monday  
until tonight. - Morning Fair, this  
week. Cold in the mornings, but  
beautiful days. I just shipped  
those claims Tuesday. Look up  
that Humphreys from Spirit Lake  
and think that the Lithium is

Oct 22, Sunday, Sept. 11. -

Looking the Lake  
Co. region - started about  
10 o'clock. The air is  
~~rather~~ cold & rainy, the  
sky of bluest blue - with  
swooping cirrus clouds - the  
peaks ~~are~~ are ~~are~~ are  
inimitably colored -

to be part way out.

The *Hyemilla* are almost in  
for good into winter quarters  
to the present. *Spizella* etc.  
are still lively in the  
old flocks. - but *Alvatar*  
have a thick *Spizella*  
have evidently gone in to stay  
In a northern valley of  
perspective view of road crossing.  
I found a large log of timber,  
the log, *Strophocarpus* - *Scrub*  
one *Pseudotsuga* - *Pinus* these  
smaller were as lively as  
if it were a great  
the best then, I

was  
in a valley - while those in  
mountain or on a very cold  
hillsides. Got  
home about 4 or 5.



Oct 23, Monday Day -

Went got the G.B. tonight  
+ perhaps Ed. W. will

Went past B.S. County, +  
got locations for some work.

I got 4 lines Oct 16. They are

Sanctifying depression. Above, in

Hopetown, N.Y.

Endless hills - once installed the  
Franklin Co. N.Y.



Lumina peltata - East Town Lake  
Warwick Co.

Myriophyllum

Helianthus

Helianthus - North Hampton  
Essex Co.

Helianthus - Oldham

(Oct. 29, 82, <sup>Sunday</sup> Since my Cash writing  
I've made no entries on the many  
coasts of this week. Tuesday noon  
Ed. W. got the "Rouge". His (and  
Hart's) successor is a young thing from  
Colorado, — dark, slender, — Will Brown.  
He talks rather rough, like Hart,  
Is no pressman at all, can't even

Hand, let alone "making ready" forms,  
Hessik used a sheet of tissue  
this week. I read the "Scout's  
Directory" about Wednesday,  
Curiously enough I had  
sent Cassius a "K" instead  
of \$2. without even missing  
it. <sup>\$3.00</sup> He sent it back. Friday  
evg. "Hully" + I set up a list  
of Iowa City shells. Corrected  
it last night, + made it up,  
will work it tomorrow morn, I  
guess. Friday evg, at 10 o'clock,  
Aunt Susan + Uncle George got in.  
Am far more favorably impressed  
with Aunt S. than I had anticipated.  
Today I've done little. Wrote  
out addresses on 98 envelopes for U.S.

and foreign. About 4 o'clock I  
started out for a little walk,  
wore my straw "Hamp" hat,  
went up to that Brasil, Limosa  
locality on "Barra da Chua" road, I  
didn't find much, & it was  
cold, so started back across that  
pasture west of road. There were  
a lot of girls (& young ladies) playing  
"Snap the Handkerchief" on the grass.

I joined them after while &  
had some fine! games, if they  
were "Cesky", some were quite pretty.

Sent letter to Rev. about  
Wednesday, I believe. Also

to Sumner, I think, fossil Soc. etc.

Also letter to Fols for Rafinesque. (He owes me 50¢.)

Monday, — Today Willis, where I've  
been getting my dinners, moved away.  
I "run" my list of U. S. this eve.,  
after supper. Brown run the engine  
for me, & wouldn't take the beer  
for it (!!!!!!) An exception to all



program I've ever seen. Walter is  
"hash slinger" at the house, now.  
(The Walter I knew down in the country, I mean).

After running the list, I asked Vover  
what the bill was <sup>as a country, merely</sup>. He said about  
50¢! The paper was coarse tinted  
book paper, which, at 1¢ a sheet, out-  
ding say 24 to a sheet, would cost about  
10¢. The work was all done by Philby  
and myself, after working hours. Later  
out the paper, I <sup>looked</sup> ~~made~~ it up at noon,  
so there was no other expense to office,  
except wear of time. The most careful  
presswork reduces this to a minimum.  
John was jealous and mad, so he just  
charged it on "Lanny" (Brode) stuck on  
all the stamps, and used up all his  
saliva on them this aft.

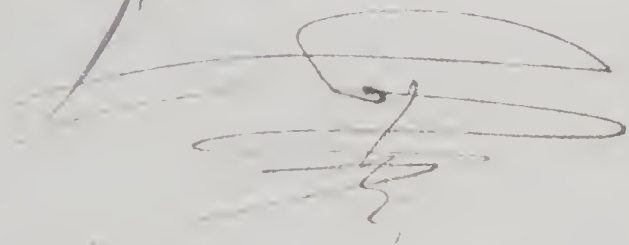
— Billy —

Walter wants me to go to the Post. S.S.!!!

Oct 30<sup>th</sup> Tuesday Evg - Aunt L.S.  
- Uncle Geo. left this evg for  
Chariton Mo. I paid John 50¢  
for that stock (list) + 125.¢ for those  
statements I got a long time ago.  
I have a "r" to let that this  
office will never pay a cent of it.

I'll get even with that  
orange you got. Sent off  
those 98 envelopes today.

They ought to bring me  
something soon.



Nov 1<sup>st</sup> '84 - Thursday Evg.  
(A good way to keep track of  
length of river is to see

when the South St. of Saint-  
Opp. is in comparison to these three  
willow trees in Munro's hollow,  
just opp. house on E. row (or more, or so).

Later: made out cabinet nos. for  
Mollusca —

(Libby) 8 o'clock  
" " "

Cu

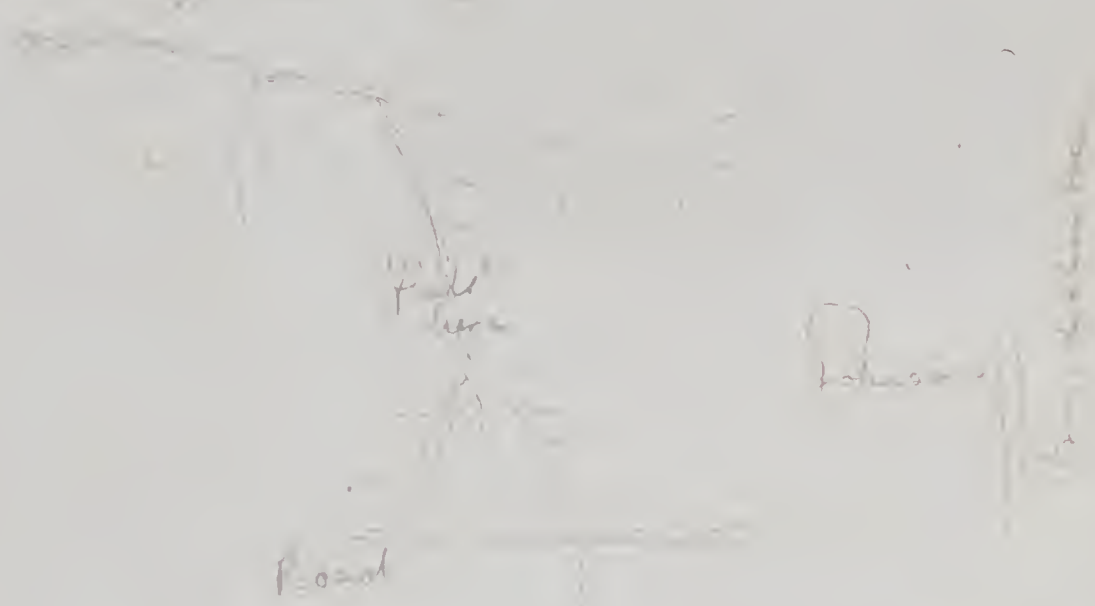
Friday evg, Read "Kafkas" to-  
day. Called at B. Shink's tonight, He  
was just got in a fine lot of moll.  
from Dine. I loved the place  
(Am going to continue list of moll. <sup>in</sup> <sub>in</sub>)

Sat Evg, Nov. 4, '84 I have completed list of my mollusca  
as far as Nov. 4 '84. Lots of hard work ahead of me. Trying to get  
done by 10 p.m.



Monday, March 4, 1890

The morning was mostly  
and at 8 o'clock I started last night, (and is  
running now) but about 10 o'clock I started  
out on the hill road, north, past exults,  
turned into that house, where the road turns  
west and went as far as spring then north  
to road, I saw I had followed down that  
road and I took a Gymnasium as far as I could  
in the diagram.



About half way down this stream I began  
to turn over logs etc. In places first I saw  
what my old men they were thick. Then  
I struck a lot of small sub-cubic pieces col-  
ored, purple, white, shaped some what like  
a thin wedge. I took them for the  
first time, I saw them and was very

get some of the for another what they  
The single sheet of paper in the  
presence in small numbers of the  
contract, by at one place I found the  
specimens. They are 4-whorled species  
conical, lip sharp, shell translucent,  
white - just color of P. or B. but  
about the shape of the upper shell  
of that species, I guess. Little thin  
as a shell, no but fine! Common  
also very fine, fossils of several species  
common, Linnæ under every stick  
Plaster & fine Limestone. The  
rock and the Limestone species also very fine  
some very fine fossils also. Truly very  
good water. The best fossils  
were on days in the wettest part  
of the river - regular days. At the best  
place the stream was a channel cut  
out, but spreads around on a level  
with the ground. Where it has a  
channel and not the earth  
is very poor there.





Wrote 7, 10, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

(1) F. A. Lamson, Sedalia, Mo.

He wants three species marked on list no. 1.  
and offers "Palastrigosa, Poly, hexacera, neozona, darwini, scum-  
poni, jacksoni, Steu, latosum, Mes. roemer, etc"

(2) A. A. Huickley, Du Bois, Ill (Washington Co.), He wants  
species on list no. 2. + offers, U. pressus, fuscatus, ra-  
diatus, complanata, Ane fuscicaria, Salomonica, Mes. calceola. Vir.  
intertexta, Amnicola parva, Lunaria zebra, Hy. elevatus, + 2 southern  
Ancylus.

(3) J. B. Upson, Rockford, Ill,  
Desiderata, list no. 3, offers Ill. + Fla. shells in  
ex. he ought to join out.  
Urosalpinx - U. fuscatus, upsoni, Mes. calceola, Ane,  
oregonensis, Liophas subconicatus, Vir. intertexta,  
Am. parva, Ancylus filorus, Hy. wheeleri, Ph. elliptica,  
Jan. upsoni, Vir. appressa, Poly. amicalata, viridula,  
Urosalpinx - punctata, papilosa, F. begini, H. bicalcitra,  
Turritella carolinensis, pulchella, Melampus 2 = dentatus,  
+ marine moll.

Have a new "diabla" now. — Otto  
Kemper(?) from press office. Have been  
busy night + day for a while, and if  
I get many letters will be just  
rushed for a while now. — E. G.







Monday night 4th June, 1892. ...  
 ... (thought ...)  
 ... "Vermont" from office).

This Vol is  $\frac{1}{3}$  full of these sp., all  
 done up in "bundles" of 4-6 in a

... 25	} This is made a count of 5 to a bundle. All are moderate sized & holes, being in a fine abundance.
... 70	
... 40	
... 5	
... 20	
... 5	
... 5	
... 20	

Two letters today, except one from ...  
 saying that there are but 5 ...  
 ...

Early morning. Cold & windy! Road is not good.

(6) William C. ...  
 ... will send in ...  
 ...

34.25 in. Spent time with some other, I

Friday - I packed & I started on a drive in the morning

eggs, 10

eggs, 100 or more, but I only

packed, 10

packed, 135

packed, 10

(100 or more eggs)

packed, 10

packed, 10

I also got a series of clear glass dishes  
last night. Have been using them in  
the rooming.

Most of the shells were those of the

4 or 5 in. in diameter

11

Saturday

12 (Monday) Nov. 15, 1904

Since my record of Tuesday, 14th inst. the weather was

clear, sunny, mostly, but cool. On Wednesday I

had "a very heavy fog" from 10 a.m. to 11 a.m. I

had a letter from Miss

(7) Miss Lane a gift box, Santa Cruz, Cal.

She sends a lot of species she wishes (but as I am

going a lot of Cal. sea shells, and a few fresh

shells from x. Thursday night I went to the

"show", (Pine Grove), or didn't do anything.

Friday 10 a.m. (last day) I packed up some shells

as follows

Large sea shells 1500

Small sea shells 200

Flu. shells 10

Land shells 10

Horquilla 100+

St. John's 50+

Chrysomelids 100+

Longhorn 8+

Beetles 1000

1000 or more

1000 or more

1000 or more

1000 or more

1000 or more

Don't know today if the Lyons will  
come. Are going to the show tonight  
with Emma, the play is "Black Diamonds".

x x x

Friday Nov 19 1880

It has all settled nearly & look the  
same. A very white frost, but a heavy dew  
on the leaves of the trees & bushes, but not  
at all. I went over to the pond & got  
yellow throats & other mostly *Protonotaria*,  
common to several places near the mill, also  
the old ones. We took up to the pond & back  
of the mill & walked in a fine time. Took  
nothing but 2 *Lunax*!

This morn I identified those "stated" ground  
by the mill by the Lyons, Ross, & Lyons Co., but  
don't know just where the old ones. They are *Lunax*  
*gigantea* like.

Edw. J. [unclear]



very small (1/2") thin shell from the same locality, as  
the shell is small. It is a little from the same

Shell dextral, small, flat; white & 4; Aperture, oblique, oval & sub-ventral  
without teeth; Whiskers not connected above nor below.

Shell benticular, white above flattened, pinkish very deeply sinuate.  
A small narrow umbilicus. Aperture very oblique, sub-circular.

Shell flattened, whorls rounded above and below. Aperture <sup>transverse</sup>  
oblique, sub-oval. discoidal below.

Gyraculus, sp.

These two genera are certainly very closely related. It is in  
fact difficult to distinguish them by a diagnosis.  
Having once seen a species of Monetus, however, one can  
always tell the genus at sight. Gyraculus is sometimes somewhat  
but never so flat, & sharp. Another point, very important & not  
mentioned above in my diagnosis is: Apex sub-ventral.

It is rather a difficult question as to whether the  
shells of Planorbis are dextral or sinistral. If such forms as  
Monetus are dextral Gyraculus, of course must be included also.  
Then it is hard to prove that Planorbis is sinistral, as  
said by Say, Wetzel, &c. If so the lip is produced below in these  
and above in the others.

Thursday

No letters today, yesterday rec'd  
one from A.A. Linkley, D. Poi. Ill. (names all  
in 2) I've not written to him since receiving  
his card, but will now, soon as I hear from  
Marble & Whisman, & see what they will send  
me. He wants *Myragosus*, *Myriopholis*, *Myriopholis*,  
*Pandora*, *Myriopholis*, *Papilio*, *Myriopholis*,  
It will be hard to make up a nice lot for him.

~~Myriopholis~~ ~~Myriopholis~~ ~~Myriopholis~~ ~~Myriopholis~~  
Cold again today, windy, too. Not splendid.

I mean out

Nov 25, '90, Sat. evg. Rec'd a box from J. Whisman, D. Poi.  
today - (Xpr changes 95¢) - Its seeds these  
species:-

- 539 - *Myriopholis* *Myriopholis*, 4, "Gd".
- 540 - *Myriopholis* *Myriopholis*, 10, Cedar Keys, Fla.
- 541 - *Myriopholis* *Myriopholis*, 15, "
- 542 - *Myriopholis* *Myriopholis*, 20, "
- 543 - *Myriopholis* *Myriopholis*, 10, "
- 544 - *Myriopholis* *Myriopholis*, 1, "





Very little, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

sent them with a letter this - some per  
the S. Xps. Got at noon a box from Mr  
Morse, It pleased me very much. Shells were  
all fine & well cleaned. A very generous lot  
of deposits. Here they are -

- 546 *Unio capax*, Drm (1) Miss river
  - 547 *fuscatus*, Lea. (2) Fla.
  - 548 *formicarius*, Lea (1) Cahawbe river, Ala.
  - 549 *Unio corpulenta*, Storer (8) Blough Miss river
  - 550 *Unio zebra*, Hyatt (70+) Swamps, Worcester, Ill.
  - 551 *Limnæa parvula*, Lea (80+) Miss river
  - 552 *Lithæa subcarinata*, Hyatt (7) " "
  - 553 *Unio subcarinata*, Hyatt (15)
  - 554 *Limnæa decisa*, Muhl (80+) Unio
  - 555 *Lithæa insculpta*, Hyatt (7) Fla.
  - 556 *Unio calceola*, Lea (12) Rock river, Ill.
  - 557 *Unio subcarinata*, Lea (2) " "
  - 558 *Unio zebra*, Lea (1) Miss river
  - 559 *Unio schroederi*, Lea (1) Cahawbe river, Ala.
  - 560 *Unio zebra*, Hyatt (9) Cedar Key, Fla.
  - 561 *Unio relictus*, Hyatt (5) " "
- 624  
16 species, about 300 specimens (100 of them unclean)





a fine scheme at the office, making the  
corridors, breaks. Most of our forms  
as run at "B's" office, they are right and  
long. There is the list of sp. offered by Watson

*Leucospiza* (in part), *Leucospiza*, *Leucospiza*, *Leucospiza*, *Leucospiza*,  
"white" & "green" ; *Leucospiza*, "Bridges" ; *Leucospiza* ;  
*Leucospiza* "Bridges" "Bridges" "Bridges" ; *Leucospiza* ;  
*Leucospiza* ; *Leucospiza* + *Leucospiza* ; *Leucospiza* ; *Leucospiza* ;  
*Leucospiza* ; *Leucospiza* ; *Leucospiza* ; *Leucospiza* ; *Leucospiza* ;  
19 species, about 8 of them new to  
me, but duplicates of many will be very available.  
"Mammals" species marked on list, *Leucospiza*

Dec 2, 82, Sat. eve.

Rec'd card from A.H. today,

He wants me to draw some figures for him  
He says that that last colored  
card is which B.S. & I have called "U  
card" is U (in - Nov 27)

Called at Bolwell's house tonight, He wasn't  
at home, but his sister told me he had a  
lot of looking out toward Clinton, with  
white in the north, appears to be



Dec. 3, Friday, 1882.

Cold & heavy.

of that snow. Nearly all melted. Went to  
Hobbs this noon. He was in a rush, so  
got nothing but his some dinner. He said he  
thinks like a cornucopia. I undertook to get some  
business for "Saw" for him. Got about 100  
living ones, mostly *Ligamantia*, *Stomatopoda*  
just above saw. Water a foot or  
deeper, rather cool, chopping through 5 in.  
ice. Got all shells out of other side of  
our house today, & in cellar - way. Packed  
a little lot for Walter H. H. also.

Thursday, Dec. 7, 1882. Monday noon sent  
lot of shells to W. H. H., Eng. wrote to Hudson  
& fixed up sh. for him. Tuesday evg. worked at  
office. First set a publicity note hel. & sent.

Then got onto a lot of "Dodger" for "big  
edition" or kly. Only 5-00 each of 2 forms.  
got one on each press, and after 12 pm they  
were "standing" & I "worked" 12-24, & some  
until 2:30 or so. Then we folded till  
morning. Went home at 5 & slept  
till "morning" (about 10 am) in train.

at 6:15 or 7 o'clock. Found all the boys  
there, took some time to get drinks.  
I didn't mark down my observations  
until we got to Grinnel. Here are  
some, scrawled on a card in my pocket

"Between Grinnel and Kellogg lots of deep 'cuts'.  
"Country hilly, with many deep valleys + creeks.  
"Large Creek here"

"Metz: Not so many 'cuts', only one since  
passed Kellogg. Country rolling"

"Altoona: just through long 'cut'."

This is all. I regret not taking notes.  
Some more low 'cuts' just E. of ~~Grinnel~~  
Stone Quarry at Colfax.

At Seattle, started out with H. K.  
from Depot (on west side). We strolled  
up towards Opera house, + meeting the  
"crowd", followed into it. There we  
heard short addresses by Gov. Shumway, Mr.  
Clapp, Saml. Threlk, "The Mayor of Seattle" +  
"The Hon. Mr." + c. etc.



After this, dinner at "Above House" the  
best hotel of the village. Quite a sumptu-  
ous banquet. Then went through  
"Registrar" Office, a fine building  
fearful pressroom in basement  
dark as Hades. Then to Captain  
which I won't attempt to describe.  
After this, and a good "Four Leaf"  
we took in the printing establishment  
of Messrs. Miller Girta and Waters. Their  
establishment is just as nice and  
complete as one could wish. Every-  
thing clean and stylish. Could not  
want better place to get artistic  
printing done. Their card is a  
beauty, and Mr. Miller, a perfect  
gentleman, took us all around, and down  
the laboratory. The home-trip was  
rather uneventful - started about  
5.15 + arrived 10 or so. When we  
started out there was nice, comfortable, but  
commenced to snow soon at 5.30.



regular blizzard when we arrived at  
Seattle: Very cold when we got home,  
and also all day today. It

I went down about eleven a.m.,  
and got <sup>and</sup> letter from A.M. Pa got a  
box, also, by mail. It contained a few  
shells, and the shells he wished me  
to figure for him. Here they are:-

561. *Planorbis truncata*, Duc. (2)

562. *Unio blandingianus*, Lea. (1) Lake & river, Ill.

563. " (10)

564. *Ponera depressa* Say (6)

565 consists of a nice lot of a little *Unio*  
of which (I suppose) he says: "I do not know the  
name" It is small, shining, the shape like  
a full grown, base specimen of *unio*  
various white or delicately colored. Epidermis  
very much like *unio*, unicolor &  
light, or green rayed. Here is outline:-



*Blandingianus* has lived  
near like so many Ill.  
Unio.

The P. depressa, or fine, light like a ...

The Planorbis ... remind me of the ...  
have shells somewhat, but more of that  
shell figured in L. and Pr. 20, the "Physiculus"  
I shall be able to make complete studies  
of them, luckily.

*Physiculus*

Today 200. m. Got some drawing paper today  
for Abbott's plate. 35¢ and thumbtacks, 10¢. (really  
5¢ piece) 5 @ 5¢ - 30 --- cheated him out of 20¢)

Those Planorbis are simply wonderful! varying  
from forms not very different from *Helisoma*  
to elevated, cylindrical, physa-like shells with  
columnella imperforate, and covered by callus  
fold, as in *Limnaea*. I now believe  
*Helisoma* to be sinistral. There seem to be  
two species of them, one large shell like  
larger umbilicus + more oblique aperture  
than others. I have no doubt that  
they are the "L. ..."



Monday Dec 11. 8a. a.m. Sunday. - Over all  
the afternoon lots of work around the  
house in the morning. - Today got in  
a mail parcel from W. H. H. mean. He is  
a much better collector than I had supposed,  
sends fine living shells.

- |     |   |                                   |
|-----|---|-----------------------------------|
| 565 | <i>Euxis</i>                              | (1) Fine, Roslyn, Long Island.    |
| 566 | <i>Ulex albicollis</i> , ( doz. + )       | Fine, Lebanon Springs, N.Y.       |
| 567 | <i>Stenonema</i> = <i>fraterna</i> , (15) | " "                               |
| 568 | <i>Hel. alternata</i> , (box full, bill)  | "                                 |
| 569 | <i>Heliconia</i> 2-cornuta, (18)          | Fine var.                         |
| 570 | Larva of God-did fly?                     | "                                 |
| 571 | <i>Synsira</i>                            | (15)                              |
| 572 | <i>Phya</i>                               | (25+)                             |
| 573 | "   | (5) Onota Lake, Pittsfield, Mass. |
| 574 | <i>U. maculata</i> - (15)                 | Fine.                             |
| 575 | <i>Lycopodium parvum</i> (?)              | (12)                              |
| 576 | <i>Pap. contracta</i> , (1)               | "                                 |
| 577 | <i>Limnophya</i>                          | (50++)                            |
| 578 | "   | (6)                               |
| 579 | <i>Triadopsis</i>                         | "                                 |
| 580 | <i>Ustilago</i>                           | (3) Roslyn, Long Island.          |
| 581 | "Star fish"                               | (1) " "                           |

The shells are fine, the *Tridopsis* is new  
to my coll. see the *Linnaea* 517, a compact  
little species. *Gyrulus* or 2 very small.  
The *Linnaea* may not be of sign.



Also got shell from Hinkley this morn. (2)  
(Apr. 50 & charges) It reads -

- 582. Unio complanatus, Sol. Madison Co., N.Y. - (4.)
- 583 " radiatus, Lam. Otrigo Co., N.Y. Little Lake. (4.)
- 584 " pressus, Lea. Kents Creek, Winnebago Co., Ill. (4.)
- 585 Anodonta ferrussaciana, Lea. " " (4.)
- 586 " salmonia, Lea " " (4.)
- 587 Via intertexta, Say, Ponds in Winnebago Co., Ill. (8)
- 588 Try. elevatum, Lea Kishwaukee river. Winnebago Co., Ill. (6)
- 589 Gon. livescens, Utk., Mohawk river, N.Y. (15.)
- 590. Cassidulus coronus, L. Cedar Keys, Fla. (3)
- 591. (2)

about 8 new species to my coll. { 2 more from Wm. H. H. }  
( " )

Wednesday, Dec. 13. R., Eng. Recd. to-  
day a pkg. from Miss Horx. (Apr. 50)  
Got letter from her yesterday. She sent  
the shells - She evidently thought  
I was interested in limpets -

- 592 *Heliconia aculeata*, (17) - Santa Cruz Id.
- 593 *Hyacinthella*, Teyon. (15) "
- 594 *Decuss. argentea*, Lea. (14) "
- 595 *Pipa californica*, Rowell (17) "
- 596 *Monocera* *capilloides*, Conn (3) "
- 597 " *equatum*, Conn (10) "
- 598 *Chivella biplicata*, Sby. (22) "
- 599 *Purpura varicosa*, Val. (13) "
- 600 *Halictus crackerodii*, Leach (2) "
- 601 *Amasa patina*, Esch (7) "
- 602 " *arui*, Midd (11) "
- 603 " *spectum*, Nutt (13) "
- 604 " *persona*, Esch (14) "
- 605 " *pelta*, Esch (9) "
- 606 *Rovellia radiata*, Conn (12) "
- 607 *Lollia gigantea*, Gray. (8) "
- 608 *Macella paleacea*, Sby (36) "
- 609 *Macella incisa*, Hinds. (21) ✓

17  
3  
10  
22  
13  
2  
7  
11  
13  
14  
9  
12  
8  
28  
21  
18 244 (13 1/2)  
18  
64  
84  
10

609  
609 18 species, 249 specimens, average, 13 1/2 of a species.

15 of the species are new to me.

Counting up tonight, I've got about 44 new species since publishing my list.



Wednesday Evg Dec 20/82

Tonight finished packing ch. for

W.H.W. send him 20 species about of mails, a few  
Cal. sh. Aemacras etc. Write him a long letter, too.  
this time. L. all snow of Sunday is now melted  
by last 2 days rain.

Dec 20, '82  
11:00 AM P.  
To whom it may concern: Be it known that  
Charles W. Peckham & H. H. Dobson have this day made  
a wagon and mutually pledge each other to  
adhere to  
certain conditions, namely, that if Miss  
and Chapman and Mr. Fred Newcomb are married  
(once)  
within 1 year or 6 mos. that Alice is to have  
her choice of a double hand full of myshells,  
and if they are not, I am to have a cake of  
kind. I shall specify, which she can make on  
to make. I am witness whereof we set hermits on  
this 20th day of December 1882. H. H. Dobson  
hand seal this  
witness - Wm. S. Peckham, (+) her mother.



Dec 21, 82, Rec'd letter from J. H. Brown, offering me 20% discount  
on "Structural + Systematic". Write today to Laura  
J. H. Brown, send her 10 N. spatulatus + 4 B. pignoneum,  
Eug. J. P.

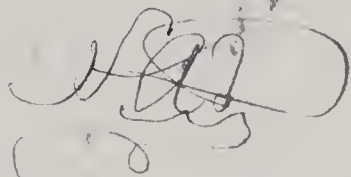
Dec 25, 1882, Christmas day! Yesterday  
noon rec'd letter from W. H. Brown. He is very  
much pleased with drawing, and wants  
me to make some more for him.  
Today, got some of his papers, mostly on  
Urinoida Brown + Benoit. Paid a  
good sat. evg.

(From recollection, Wednesday evg.) last night  
had such a funny dream! I dreamed of  
a new genus of Planorbidae, called Plan-  
axis. The shell seems as vivid in my  
memory as many I've actually seen. It is  
small (1/2 in. diam.) flattened, bilaterally symmet-  
rical, <sup>(about)</sup> 5-whorled, with shining smooth epidermis  
like a Hyalina, brownish, with numerous sharp  
blade-like ~~into~~ transverse ribs, crossing the  
oval whorls. Aperture oval, oblique. whorls not  
very ~~fully~~ increasing rapidly increasing.

In form this shell seems rather like Pl. steinheimensis as figured in Ann. Nat., June, 1882, by Hyatt, but is flatter and different in spiculation, &c. If not belonging to Planorbis, as restricted now, to exclude Helisoma &c., it must form a genus intermediate between this and Gyraulus.



This is a poor figure, looking more like Patula perspective.

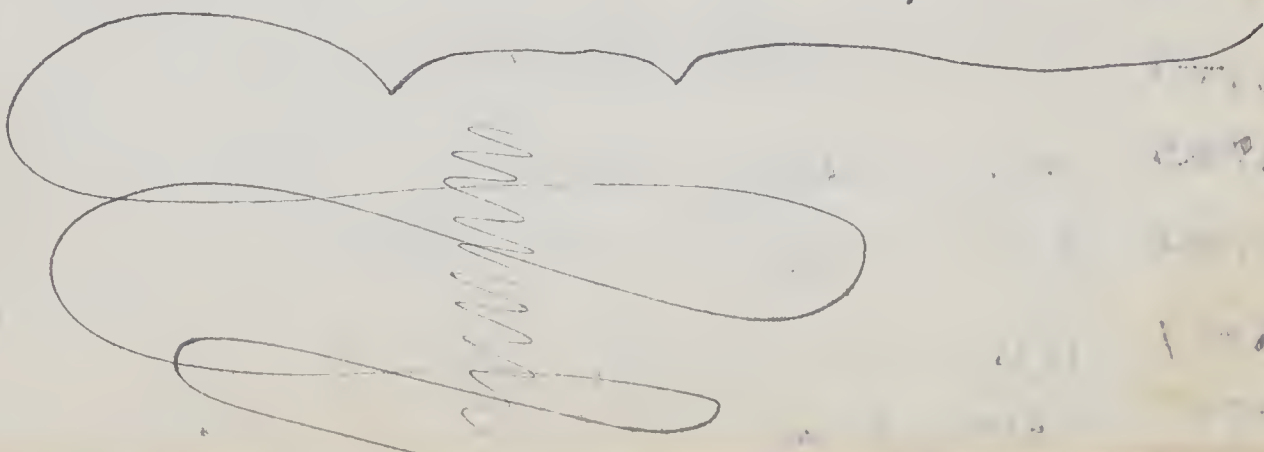


Wednesday, December 28, 1882. This morn Brown starts his Bakery with a fine Pi of "Local" page daily. It was all matter — no plate or cuts, at all. Otto brought it up in bucket.

Bohnnel came up today. Has had no couch. Luck, except find of single Urodonta.

I must write to G.M. before Sunday, 'tis a shame to wait so long.

Pe arrived last night after I had gone to bed.





Monday Jan 1, 1883, New Year Day!

"My" happy new year "was" spent at office this  
morn, ditto yesterday & most all the time  
now. This aft. got my photo taken at  
Clench's. (After all I've been promising of the  
place of Pressman to me, he got a Des Moines young  
fellow to take it. It's got in this  
morning. I haven't talked with him  
yet, but he can't pan out worse than  
Booru. Am going to write to Alb now,  
Heard from Hudson today.

Jan 3rd 1883: Wednesday eve. Yesterday eve wrote to Alb  
& mailed letter today. Yesterday rec'd box from Hudson  
It was a pretty good one. Here are contents —  
(given with his names. —

- 610 ~~701~~. Anodonta fragilis, Lam. (1) Woodruff's Pond, Plattsburgh, N.Y.  
611 ~~702~~. Unio integer, D. Kay (7)  
612 ~~703~~ Gyraulus albus, Müll. (15) Woodruff's Pond, Plattsburgh, N.Y.  
613 ~~704~~ Anniocula pallida, Hald. (40+) "  
614 ~~705~~ Zonites nitidus, Müll. (22) Plattsburgh.  
615 ~~706~~ Bulimus hyssopus, Linn. (30+) "  
616 ~~707~~ Vitrea lineolata, G.S. (22) "  
617 ~~708~~ Maerocyclops concava Say. (13.) "



- 118  
~~719~~ *Limnophya catascopium*, Say. (2) Lake Champlain, at Chazy, N.Y.  
 (1 Banded var.)  
 619  
~~710~~ " (304) Lake Champlain, at Plattsburgh.  
 620  
~~711~~ *Sphaerium rosaceum*, Paine, (lot) "  
 621  
~~712~~ *Goniobasis liracens*, Luke. (17) Lake Champlain, Grand Isle.  
 622  
~~713~~ *Limnæa stagnalis*, ("Lim"?) (9) Plattsburgh.  
 623  
~~714~~ *Limnophya palustris*, Müll. (50 or so) "

In all 14 species, about 6 or 7 new to me.  
 The shells are well collected mostly, but *Ambostes* broken  
 apart. *A. fragilis* is a thin fragile green shell, very  
 beautiful, shining, beautifully marked beaks (something like this)  
 Some of the smaller specimens of "*Palustris*" were almost  
 indistinguishable from my *capitata* in form.

The *Bulimus* are smaller and more obtusate than  
 Spirit Lake shells.

*L. catascopium*, a fine species! seems to have five revolving lines.

*V. limpidula* smaller than *A. alb.*

"*Melanthis integer*" is almost certainly *M. decis* a, Say.

*Macroychia* not so very small, after all.

*Amnicola pallida*, & *Sph. rosaceum* don't differ very much from allies.

*G. albus* seems to be a good species.

Sunday Evg, Jan. 7. 1883. In writing up coll. nos. I find little

but mistakes. I now transfer a species as follows

561 *Urtella redivata*, Say, (5) Glasco, Ala, now March to no. 624.

Jan. 7, 1883, Sunday eve. - Nothing of special note has occurred since my last writing.

Rec'd a postal from ~~Alb~~ <sup>Alb</sup> inquiring about my barbarous delay in answering his Christmas letter. Today and Saturday I worked nearly all the time on small cylinder - Victor (our new woman) don't know a thing about it. I am by no means at home working on it yet - but hope to be before long. I have had a

lot of job forms, bills &c. but no book forms as yet - will get one of "Animals of Iowa" tomorrow, I guess. May all good spirits help me!

To-day have been so busy! went over to Foways this noon with Emma and Willie. Willie's aft. washed away at clams for Hudson some status, propos, solidus, avo. corporato &c., &c. I've been correcting mistakes in my cabinet nos. this eve, & have got things somewhat straightened out. My last number is ~~561~~ 624.

I saw the Bolander's figures of Succinea, Helicoma,

Lunophyas etc., in Call<sup>and</sup> McGee's paper on the  
 Löss of Des Moines, Ia. They are pretty good, but  
 I am bound to treat them in Asch.'s work  
 I hope to hear from him very soon.  
 The proof of my photo was not at all satisfactory, so  
 I shall sit again soon.

Acmæa.

Apex nearly central. Adults nearly smooth.

Young more or less ribbed. rather sharply conical, apex  
 slightly posterior, sharp. (acute) fin with 25 blunt ribs,  
 or none. ----- pelta, Esch.

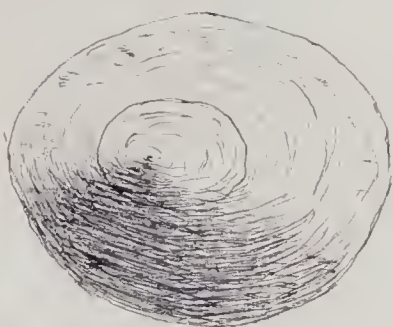


fig. 1



Acmæa pelta, Esch.

(From a Santa Cruz, Cal. specimen  
 in my coll.)

no. 605.

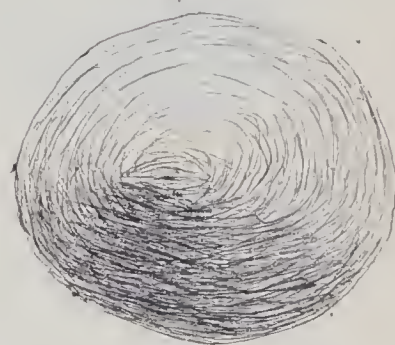
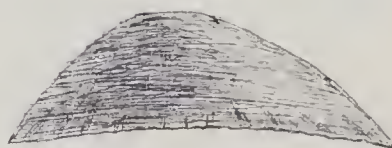


fig. 3.

fig. 4



Acmæa patina, Esch.

(From a Santa Cruz specimen.)

no. 606.

H.A.S.

Young striate, or smooth: low obtuse-conical. ----- patina, Esch.

There seems very little difference between these two species. pelta is said to  
 be smoother, more conical, with sharper apex. The margin of pelta when not  
 somewhat crenulate has a narrow rim of brown internally. patina has wider rim, & when  
 fins, is more or less dark all over interior. H.A.S.



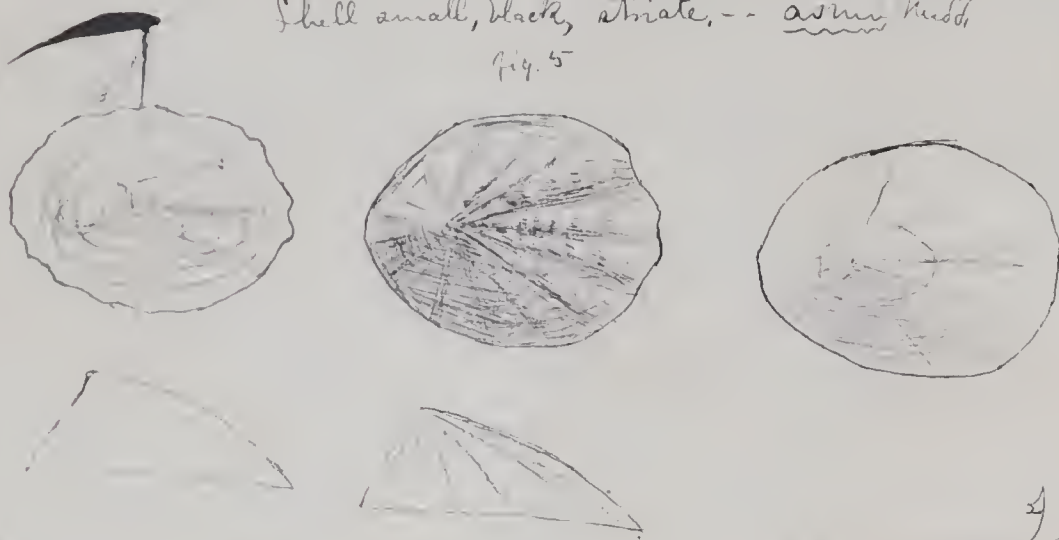
Jan 8. 1882 Monday

Apex decidedly posterior,

Shell with strong ribs, - spectrum and persona, Esch.

Shell small, black, striate, - - asmi Kidd

fig. 5



Acmæa persona, Esch.

Santa Cruz, Cal.

No. 604

fig. 6.

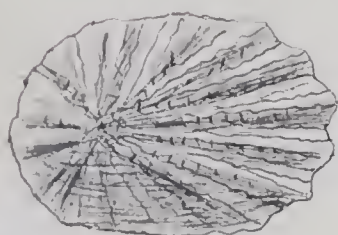


fig. 6a.



Acmæa spectrum, Nutt.

Santa Cruz, Cal. No. 603

fig. 6b.



Acmæa asmi, Kidd  
Santa Cruz, Cal.  
No. 602

These two large species of Acmæa are quite distinct, though allied, judging

from specimens in my coll. The interiors are very distinct, persona having a large dark oval central area. white around this, and dark rim more or less broken with white at

spectrum has a curious hand-shaped impression, the 5 digits are very plain & pale pink. Interior dull, not enameled as in a. persona. A. persona has about 10 or 12 ribs (radiating) usually ~~not~~ nodulous. Apex acute, smooth, brown. A. spectrum has usually more ribs. 14-20+ principal ones and intermediate ones between them. These ribs are constant, strong, sharply sculptured, strongly crenulating margins, nodulous above, in peristome not plane as in persona

(L.S.) 9, p.m.

Jan 9. Tuesday evg. in

X

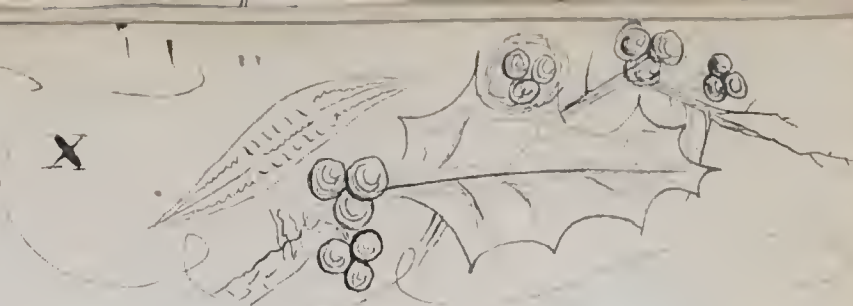


fig. 7.



Olivella biplicata, Dy.



fig. 8.



O. biplicata, Dy. slender "var."

Santa Cruz, Cal.

No 598.

fig. 9.



Monocerus

lapuloides, Cour.

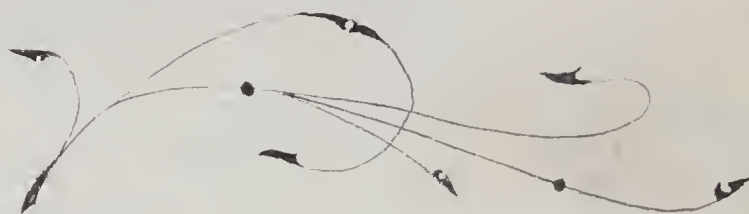
Santa Cruz, Cal.

No 596.

Olivella — Char. — Shell olivaceous; Columella with very heavy deposit of enamel above, 2-folded at base. Suture canaliculate. Base of shell with a spiral deposit of enamel externally, shell polished.

These two figures of Olivella were made in about 10 minutes. The first (and best) one was done in 3 or 4 min. or less.

This is a beautiful little shell, — a favorite with me.



Monocerus lapuloides, Cour. — fine shell.

I have but three specimens! The teeth in aperture number 5, 6 --- upper one small, and 7, - upper one quite small, but distinct. The teeth seem to be renewed with each successive peristome, and are not absorbed, or perhaps partially so in egonatum. Peristomes slightly crenulate.

Today I made ready and worked off my first book form on cylinder.

Had fair success —

M. egonatum differs principally in being smaller, <sup>having</sup> more obvious revolving ridges, carinate whels, thinner, &c., &c. The count of teeth in 10 shells gives 6, in most specimens with a very slight thickening for 7th. 3 of the juv. are toothless. The teeth are rounded, white.

Jan. 10, 1889. Wednesday eve

1111

Fig. 14.



Purpura saxicola Val.

*Purpura* is quite a plain species. deep brown with more or less sub-obsolete revolving sulcae. Lip slightly crenulate at times. body whorl very large. Some of my specimens (from Santa Cruz) have a small 5, 6, or 7 pointed conical Balanus-like creature adhering to them.

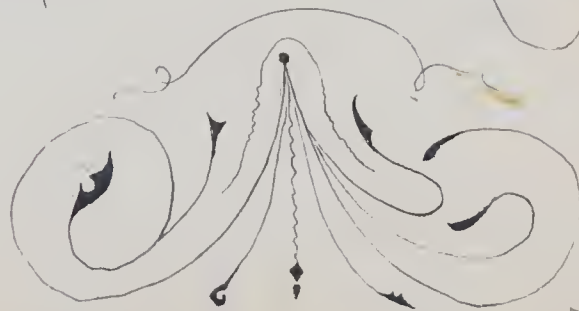
(something like this) 

I feel very anxious about Alfred. Haven't heard from him ~~yet~~ since writing my last.

I finished up Howe's "Annals" for me today, and got ready a form of the "Manual".

These profiles are fearful! Each one is worse than the last.

H.A.P.



Alfred





Jan 11, 1883, in Tuesday Evng.

Today at noon rec'd letter & box from Asst.

He writes a jolly letter but don't help me out on the matter of cost of plates. He sent *Melantherus* n.s., *Gillia* ?? n.s., and some more large rather flat *Panorhis* like those in center of the *Panorhis* plate I made.

He sent also some fine *Unio*idae from Macagon river and a *Unio spinosus*, Lea. He also returned the *Anodonta* I sent him last week (oss). They are *Anodonta ferrassaciana*, Lea (♂ and ♀) and "An. wardiana, Lea" "An. pavonia, Lea" No doubt.

This leaves me more muddled than before on this shell (the "thick *Anodonta*")

The *Unio spinosus* is a daisy!

- 
- 625, *Hyalina elloria*, Müll. (3) Cork, Ireland. (Asst.)  
626 *Gompharia papillosa*, Cuth (4) Tila ———  
627 *Cistula rufilabris*, Beck (5) St Croix, W. Indies.  
628 *Adamsiella variabilis*, As (4) Manchester Jamaica-  
629 *capitata*, Mont. (4) Jersey Island.  
630 *Lubora fecunda*, As (3) Long Key, Jamaica-

- 631 *Chondropoma dentatum*, Say (4) Fla.,  
 632 *Cylindrella agerensis*, O.B. Ad. (3) Jamaica -  
 633 " *gracilis* Wood, (2) "  
 634 *Clausilia rugosa*, Drap. 10. Cork.  
 635 *Xerophila ericetorum*, Müll (3) strange var. Wales?  
 636 *Cyclostoma elegans*, Müll (4) France,  
 637 " *variabilis*, Drap. (4) Cork.  
 638 *Ludora megachila*, Beck. (3) Jamaica  
 639 " *santacruzense*, (2) St Croix, W. Ind.  
 640 (1) Lake Oso, Fla.  
 641 *Ludora verrucosa* pfr. (4) Buen Ayre, W. Indies.  
 642 *Xerophila ericetorum*, Müll (3) Masolan, France,  
 643 *Gon. interrupta*, Muls. (5) N. Carolina  
 644 *Strophia micans*, Bin (3) S. Fla.  
 645 *Lymnaea emarginata*, Lam. (1) Upper Amazon.  
 646 " *subviridis*, Reins (1) " "  
 647 *Unio spinosus*, Lea. (1)

Jan. 12, 1883 - Friday evg. - Wrote a postal  
 to A.W. this noon

Of the shells rec'd. from A.W. yesterday, seven species are  
Cyclophoridae. 4 Genera, 7 species. Most from West Indies, In this  
 connection would be Cyclostoma elegans, from France, a fine species  
 with concentric spiculation of  $2\frac{1}{2}$  whls, circular aperture and well  
 rounded whls, with fine revolving striae. Shell minute, with  $4\frac{1}{2}$   
 whls, light brown or yellowish, fig. Does not show aperture  
 as circular as it really is. Lip sharp, simple,

fig. 11.



Cyclostoma elegans, Müll.

France,  
(636)

(as to curvature) apex  
obtus.

Xerophila in Shell depressed, umbilicate, <sup>5 or 6 whorled.</sup> lightly wrinkled. Aperture  
 subcircular, oblique, indented by body whorl. Peristome slightly  
 expanded, ends approaching, connected by light columellar callus.  
 Suture impressed. Body whorl slightly descending at aperture, Periphery  
 rounded. Shell whitish with usually darker & revolving bands.

fig. 12.



X. ericetorum, Müll. var.

Wales

fig. 13.



X. ericetorum, Müll.

Manolan, France

Something like these are two species marked simply "H." (H.)  
 These may be related to Euparypha, however.

fig. 14



"H." caperata, Montfort  
Island Jersey.

I feel almost sure that the shells figured  
 in figs. 14, belong to Euparypha. They are  
 carinate, rather depressed-globose, narrowly umbilicate,  
 $4\frac{1}{2}$  whorled, <sup>whorls slightly descending at aperture</sup> aperture somewhat oblique, obliquely  
 semilunar, Peristome simple, thickened within.



"I can't" first thing, I guess. If I can  
get a stool on the cylinder here, as I shall if  
work on it 'till spring, I don't care a cent for  
the Reg. office. I can afford to be independent.  
I haven't been outside of the yard ~~this~~  
all day today. Yesterday evg., coming home  
I stopped at Bohunil's. We consulted about  
cost of ~~the~~ plates. He thinks from \$3 to \$5 on a  
pair compensation, & I quite agree with him.  
Saturday at about eleven a.m., I got off, &  
went to Clench's (via barber shop) to sit again  
for photo. I will see proof Tuesday ~~evening~~

Tuesday evg. Jan. 16, 1883

(After writing above entry I wrote a card to ~~Q. M.~~, an imperfect  
copy of which is in back of this book, saying that plates were worth  
about \$2.50 or \$4.00 apiece.)

I've had a boss time so far this week on  
press-work. - have got off Howie's last form of "Annals" & the cover, <sup>and</sup>  
have a form of "manual" now ready on press.

Today is a boss day. - snowing, - I rec'd \$7.00 last  
Sat. evg., for Frost Time - had in no extra time, either, or  
only a little at night.

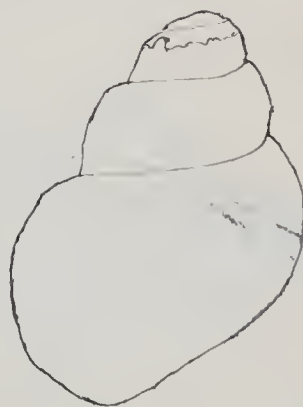
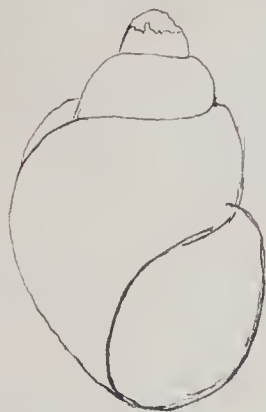


A deep reddish-apertured species, Its characters are very distinct. --- dark colored interior and very minute & numerous spiral lines, whole shouldered, <sup>apex eroded.</sup> A fine shell, not very different from M. decisa in form, but very distinct in the revolving striae &c. &c.

These are & infernally hard shells to draw,

Wes.

Jan. 17, '83. on Wednesday eve.



These figs. of Campeloma decisa, Say, from Lake Champlain (N.H.) are certainly better than last night's figs of ab. W's nov. spec. The shells are not so

not expanded. margins not much approaching. Shell spirally banded,  
fig. 15.



variabilis, Drap.

Cork, Ireland.

This shell reminds one of such shells as "Doreasia" berlandieriana and griseola.

They probably belong to Fenticicola or a closely allied genus. I have no species of the latter genus, so don't

know certainly where to place this shell.

Shell globose-depressed-conoidal, slightly wrinkled, rather narrowly umbilicate, 5 whorled. Aperture very rotundly semi-lunar, oblique, peristome thickened internally. simple, not expanded, margins somewhat approaching. ~~Aperture~~ <sup>very</sup> slightly deflected at aperture, not carinate, well rounded, spirally banded. This shell also has a slight resemblance to Euparypha.

In all, 83 specimens sent 23 species.

fig. 16.



Canidia nigra, Drap.

Cork, Ireland.

No. 640, "Lake Dora, Fla" is a lot of those Planorbis figured for him on my last Plate, which I've called "Physa scalaris, Jay."

~~Aperture greatly thickened outside oral or circular.~~

\* Peristome greatly thickened outside, continuous.

Shell rimate or umbilicate; aperture circular, ~~per~~ Adamsiella.

Shell imperforate, aperture oval. Cistula.

Peristome expanded or reflected.

Tulou, Chondrogoma, etc., and 7  
A.P. 10 p. m. and,



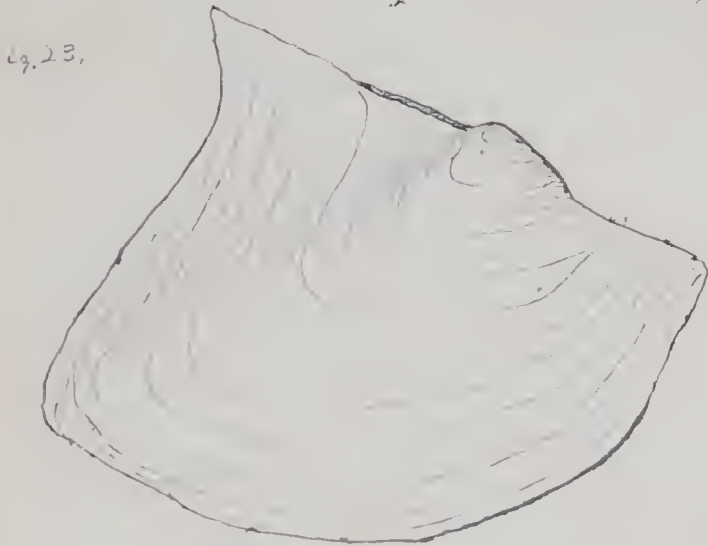
" 11 Jan 14, 1883 - Sunday 209. m

Today have overhauled all my Iowa City Unionidae -- that is my own series -- They had become very damp in the cellar-way, and the ligaments had relaxed in many of the species -- such as anodontids, occidens, &c., &c. -- These gaping shells I tied mostly, and have placed all behind stove in our "sitting room" (that is the middle room) I also looked over the shells which I had picked out for B. H. Hudson, (Pittsburgh) I must send him a nice lot, for he will be useful to me in studies of the Unionidae. I wrote a card to him tonight.

Since I've been working on the Cylinder press, I've felt more like work than I have since commenced this fall. I don't look forward to tomorrow as a weary desert, with only an oasis at noon & night, but with real pleasure -- I will have a form of "Annals of

very different from decisa. Both species have much the same form, are constantly truncate, have revolving microscopic fuses, and shouldered whorls, but the nov. spec. has shorter spire, far more numerous and conspicuous revolving impressed lines, and is very different in color. In this respect it is much like what I have called C. integer, var. rufa, b. say, from Cedar river, (see Aug, 1882, notes)

The specimens are rather more eroded than most integer decisa, - or, rather, more deeply and smoothly,  
 Aug. 18, 1883. - Thursday evening



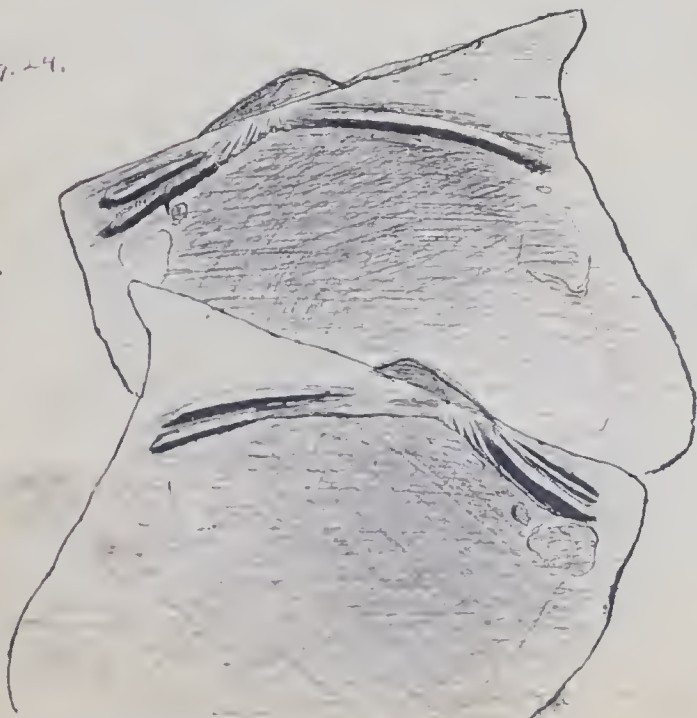
Hyria subviridis, Klein.

Upper Amazon.

No. 646.

Hyria ... char. - Shell subtriangular, elongate, inequilateral, rather thick, nacreous internally, covered with an olivaceous or brownish epidermis; hinge & margin perfectly straight; ligament external, flattened, narrow, not conspicuous. (winged posteriorly, and slightly so anteriorly.)

Anterior muscular impression rather deep, irregularly oval, with an accessory small oval impression near it, toward the beaks; posterior impression larger, more indistinct, pear-shaped, broader below,



Upper Amazon.

No. 646.

Oct 1883

palatal line simple, cavity of valves rather deep, of beaks very shallow.

Nares somewhat invaginated anteriorly and on wings.

Anterior teeth double in right valve, very much compressed and elongated, <sup>1/3 length of hinge line,</sup> and outer one smaller, often divided longitudinally, or with smaller accessory teeth outside of it; not extending to beaks posteriorly, and with numerous small or minute rather rough striated <sup>con</sup> laterally compressed accessory teeth, radiating from beaks downward and anteriorly. In left valve anterior much the same, but with a small low compressed accessory tooth inside of principal one, and ~~several~~ outer tooth trifid (~~not~~ in my specimen), or divided into several low teeth. Posterior tooth in right valve very large, elongate, slightly curved, single, compressed,  $\frac{1}{2}$  length of hinge margin. In left valve divided <sup>longitudinally,</sup> inner tooth longer. Otherwise the same.

H.A.B. 104 October 1883

Jan. 19, 1883. Friday again

Recd a letter from Walter H. Harrison this morn.

Upon superficial examination of the *Hyna subvincta* I concluded that the cardinals were represented by those fine transverse striae on hinge near beaks, and supposed that the large anterior teeth were laterals. For this reason I did not apply any distinctive names to the teeth in above generic description except "anterior" and "posterior". I am now convinced that these teeth are true cardinals, but showing remarkably the generic of anterior lateral teeth, and of that type of hinge with minute cardinals, and lateral teeth both anteriorly and posteriorly. Viewed thus, these curious shells betray their very close relation



to (the subgenera of) Unio. The teeth, certainly are  
formed on precisely the same plan --- laterals  
divided in left valve, single in right, compressed,  
lamellar; cardinals variously formed.

In the anterior muscular impression there is  
a character of perhaps greater importance, --- the  
accessory inner impression is above (or toward the beaks)  
instead of posterior and below as in Unio. The  
straight hinge ~~the~~ margin and narrow ligament  
are pretty good characters. Some of the char. in the  
description of this genus are subgeneric (or rather  
characterize ~~merogroups~~ of ~~species~~) or specific. They are  
drawn from a single specimen, for I haven't broken  
my corrugate apart yet. If the genus is an  
extensive one like Unio, the description will apply  
to only a group, like Metaptera of unio. Like  
Metaptera these shells are winged. I must  
get Bohumil's Unio ingallsiana, (a fine winged species,  
with much the aspect of a Metaptera, --- white  
nacre) from India for study. Also in litt.  
says " + + + + Two species of Ityria from the  
Amazon, rare and beautiful shells as I think,  
though I do not know how they will strike  
you. Lais's attempt to substitute his Triguetra for  
Ityria is simply more cursedness. They are no relation

whatever, if his T. contorta, from China, (only in Bras  
 Slopes collections and in mine in America) is a true  
Triguetra."

Of course I can venture no  
 opinion on this matter, never having seen a  
Triguetra. But of its close relation to Unio  
 I am persuaded.

Fig 25.



Syria corrugata, Lam.  
 Upper Amazon. No. 645. Alm.

Fig. 26.



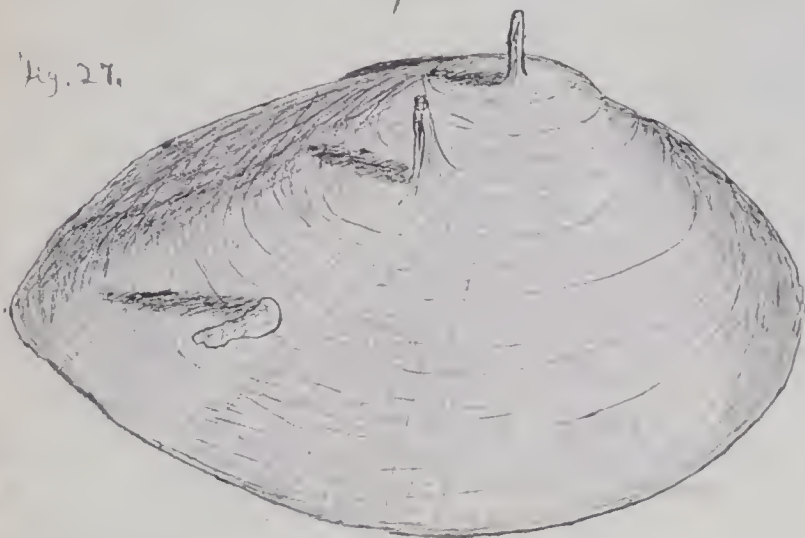
S. corrugata, --- Dorsal view.

Jan. 20, 1883. Lat. 27° 11' N.

Uro spinosus, Lea.

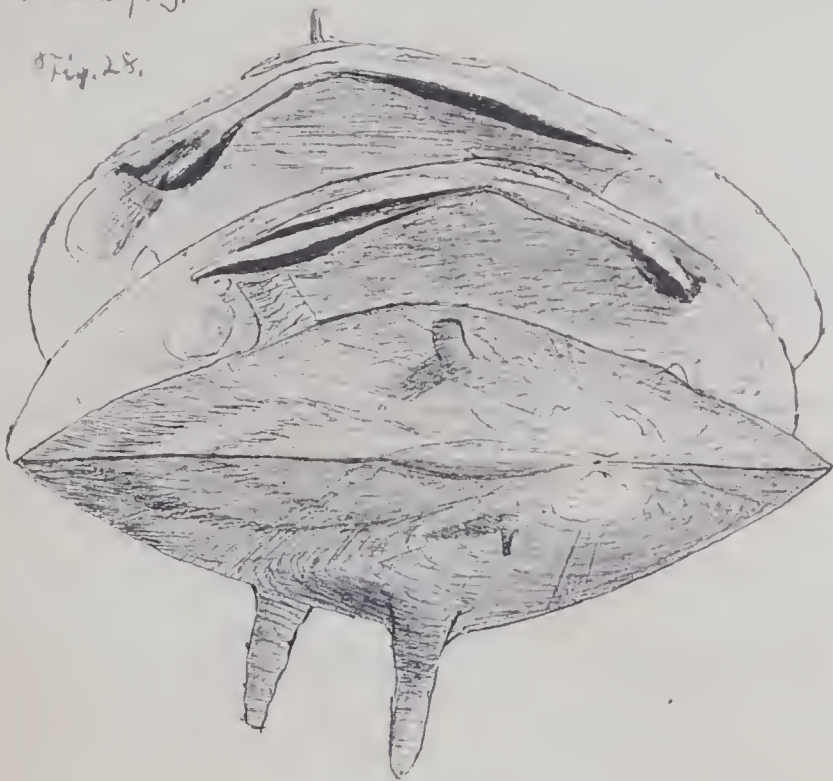
Shell oval elongate, hinge and lower margins equally curved. Epidermis yellowish, thickly green rayed, with wrinkles of growth, smooth. Shell obscurely truncated posteriorly, ~~with~~ with an obtuse angle below posteriorly, and a series of 2 to 4 slender upright spines, extending from beaks obliquely downward and backward. Spines ~~are~~ transversely wrinkled above, smooth below.

Fig. 27.



John H. May Jr.

Fig. 28.



Uris spinosus, Lea.

[illegible]

$a_1, a_2, \dots, a_n$

1. 2

1. 2



Jan 22, Monday, Evg.

I'm washing out the Cedar river and Iowa river *Campelomas*. I noticed many specimens with the outer <sup>part of body</sup> ~~whole~~ subtranslucent, in both lots. Some Iowa City shells are slightly reddish, but these are rarer than in Cedar river lot. The apex is always perfect, in both lots. They vary much in elongation. The whorls are less shouldered than in *U. decisa* from Lake Champlain. I notice a subadult specimen, nearly adult, in the lot with median *U. decisa* curina, like *U. decisa*.

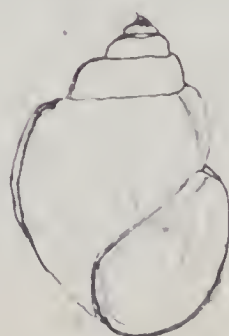


Fig. 29 is from my largest Cedar river specimen. 30 is the most elongate shell, and the only decent figure. 31 and 31a are from an olive shell, 31a is better than 31. 29 is a whole, rather rough, and with many dark lines showing portions of former apertures. It shows more of nucleus than this figured, but still very much, owing to numerous 30 is a fine smooth shiny shell, showing greatest amount of normal exertion of spire, i.e. having striae very numerous, spines 31 is a short shell with good olive-green *U. decisa* like base well, and less curved up. striae (ridges) less conspicuous. In all they are more so on outer whorl than on spire. In adult shells the columellar callus is at

thin, just above center of parietal wall, that the color and wrinkles of growth of antepenultimate whorl are plainly seen through it. There is a strong white callus just at posterior angle of aperture, extending slightly down on columella. Below (the columella proper) is strong white, rather wide, extending downward, covering <sup>the thickening</sup> the basal part of whorls internally, and above ~~also~~ covering the outside of antepenultimate whorl, spirally extending into the shell. The ~~aperture~~ <sup>columella</sup> is thus somewhat as in Pithasia.

The aperture is slightly oblique. Peristome black-edged, produced more or less forward ~~at lower anterior side~~ outside below, and retracted at base of columella. This style of curvature is very characteristic.

The Cedar river shells are many of them covered with a blackish incrustation, very difficult to remove, while Iowa river shells are easy to clean, having a clearer epidermis, and, when at all incrustated, the deposit is reddish and easily removed. The Cedar river lot, (from which all my obs. tonight are drawn), numbers about 115. Nearly all are nearly <sup>full</sup> grown, one is sinistral, and about a dozen are perceptibly tinged or deeply colored with red.

H.A.B. H.A.B.

Jan. 25, 1883. Thursday evg.

Tuesday, evg. at press, (Weekly) and Wednesday, at City Hall clock reception & Tolson's accounts for us record since Monday evg. I haven't yet heard from (A.H.)! I'm getting anxious about

him, you bet!

Hickley's "Viv. intertexta, Say" (no 587) from Winnebago Co., Ill.; seem to me to be a form of Viv. contectoides, W.G.B. (= contecta, W.G.B.)

Fig. 32



Fig. 33



Shell very globose, light, thin, (almost fragile), dark colored,  $4\frac{1}{2}$  whorled, umbilicated, (equally so in very young) whorls finely wrinkled by lines of growth, with a few darker transverse streaks, indicating positions of former peristomes. Last whorl very slightly expanded at aperture. Large, nearly  $\frac{3}{4}$  entire length of shell, aperture oval-circular, slightly flattened by body whorl on parietal wall. Peristome simple, sharp, not slightly oblique.

Revolving lines very fine sinuous, continuous, not numerous nor conspicuous. Several very obscure darker revolving bands. Epidermis dark olivaceous brown.

These shells have an essentially different aspect from the heavy Melanthosus. One would hardly refer them to the same sub-family.



Friday, Jan. 26, 1883 - evg.

Rec'd a card and 2 species of

Calliostoma from Laura J. P. Idecox, this morn.

648. Calliostoma costatum, Mart. Santa Cruz, Cal. (6.)

649. Calliostoma canaliculatum, Mart. " " (more) (2.)

Laura is stingy, and no doubt about it!

Today in the bindery I found in St. Nicholas a lot of addresses of young collectors (agassiz association). Wrote to Harry B. White, Tuxton, Miss. Robert Kenyon, Utopia, N. Y. Will A.

Bigelow, Allumona, La. H. M. Cordell,

White Salmon, 1st Leson

was this address (did not write)  
Chas W. Sprague,  
19. Oakland Ave, Chicago,  
Ill. con. all parts of world.

Jan. 28, 1883. Sunday evg. mmm

This morn. Bohmial came up. We had a good old fashioned pow-wow. This aft. I packed up a box for Hudson. Put up none but good shells, and good lots,

Here is what I sent.

*M. fragans*, 6  
*rustulans*, 30 or +  
*metanensis*, 5-  
*cornutus*, 23  
*ascopus*, 8  
*figurus*, 20  
 " (pink nary) 5-  
*solidus*, 30 +  
*ellipticus*, 1  
*subignivus*, 10  
*elegans*, 15 +  
*tuberculatus*, 8.  
*rectus*, 4 or 5  
*anodontoides*, 18.  
*ligamentinus*, 15  
 " (pink nary) 3  
*luteolus*, 4  
*spatulatus*, 9  
*occidens*, 8  
*parvus*, 12  
*plagiatus*, 20.  
*Mary. rugosa*, 6.

Also about 100 (or +)  
*Helicina occulta*, and  
 50 *Campeloma integer*  
 (or "subsolidus") from  
 Iowa river.

In all, 278 specimens

6  
 30  
 5  
 25  
 8  
 20  
 5  
 30  
 1  
 10  
 25  
 8  
 5  
 15  
 15  
 9  
 4  
 9  
 8  
 12  
 20  
 6  
 278

of *Unionidae*,  
 and 22 species  
 and vars.  
 About 150 specimens  
 of *Helicina* + *Campeloma*  
 common  
 15 or more  
 brought me up  
 some *Bulinna*  
*megasoma*, from  
 some north La.  
 locality.

650. *Bulinna megasoma*, Say, B. Shuck. -

640

9, p. m. Have just finished writing the boss  
 letter to Hudson - it ought to bring  
 me something -

SA (SW) ASP  
 (SW) haven't heard from SW yet!

Wednesday, Jan 31, 1883.

For the last 2 days and mornings

I've had charge of Postroom, & consequently  
had lots of work. The morning daily takes  
the cake for bad jobs. John D. just  
monday last, but hasn't yet left  
town. Perhaps he will start a job  
office here. Fate is awfully busy with  
Holstein Wood-book. &c., &c.

I haven't heard from Asst. yet!  
ini

Jan.

February 4, 1883,

Sunday afternoon

Today I have written a card to

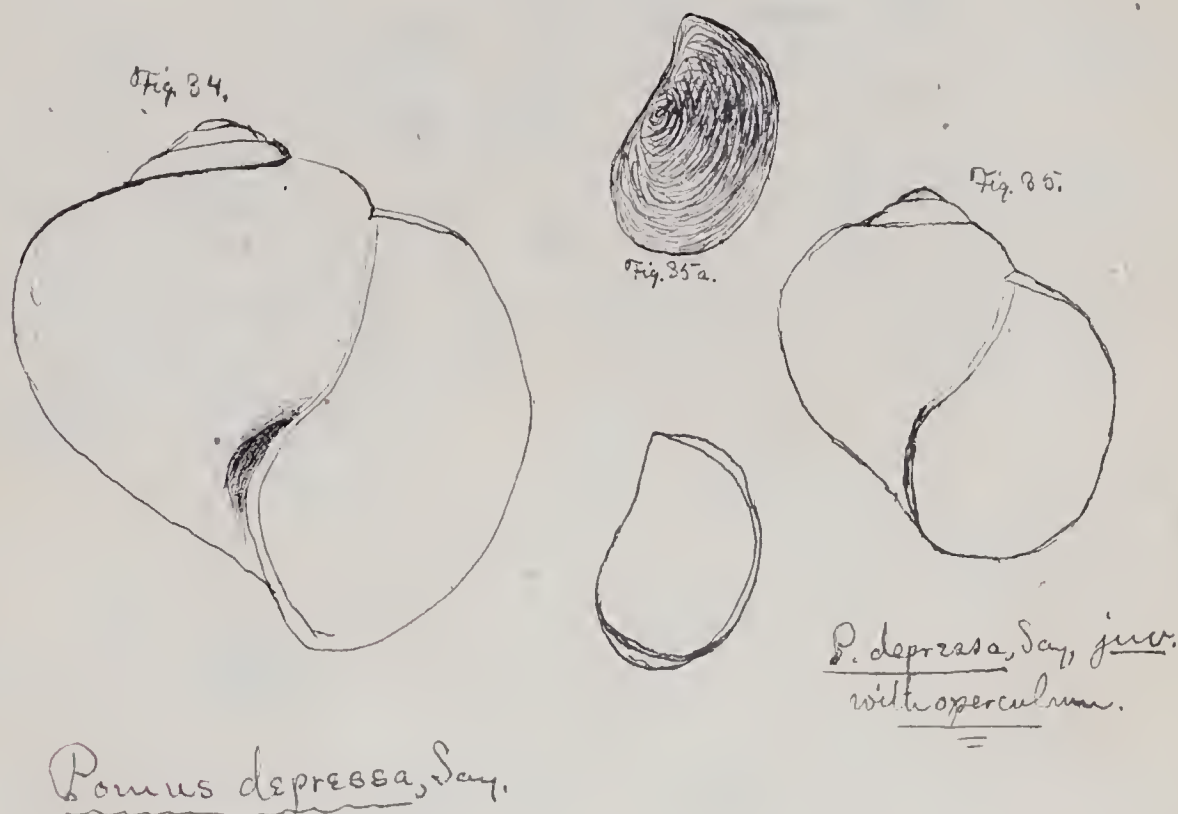
F. A. Sampson, Sedalia, Mo., who wrote me  
about ex. about Friday. I also sent

about 75 Pomatopsis lapidaria, 80 + Sorabryza  
depressa, 100 + Lim. caperata, and 25 Horculia.



I have had no word from ~~Agassiz~~ yet. — nor shells  
 either. He has not taken my box for Hudson to deposit  
 yet. Yesterday morn, as I was cleaning up book press for  
 a form of "Holstein &c" Mr. Tate came down with a press-  
 man who he introduced to me as Mr. Mearns, from Des Moines.  
 From what I see of his work on Handbook and "Little-Reporter"  
 I hardly think it will be a success. I helped him out  
 on the last. Received \$12.00 for last week's work —

---



Shell large, subglobose, thin, light,  $4\frac{1}{2}$  whorls,  
 umbilicated when adult, with numerous ~~convolving~~ vandy;  
 Lip expanded, almost reflected at base of columella,  
 continuous; aperture suboval, or subsemicircu-  
 lar, angulated on inner posterior portion, well rounded  
 anteriorly; Operculum the same in outline, concave on  
 inner margin, above. concentrically striated, the polar  
 point very near columellar margin, a little above center,  
 slightly concave, very thin, ~~smooth~~ smooth internally.

Peristome nearly all in a plane, the lower columellar portion  
a little retracted. Whorls convex, the body very large  
and globose,  $> \frac{3}{4}$  entire length of shell, somewhat  
shouldered, tapering somewhat below. Spire very small,  
short, apex obtuse, perfect. Columella somewhat thickened  
with yellowish callus. Parietal wall with a light covering  
of same, thin and transparent. No revolving lines,  
transverse wrinkles of growth more or less obvious.  
Colors, green and brown. Interior deep rich brown,  
shining. The columella is imperforate until the  
shell is more than half grown. The "genera"  
of this family adopted by Messrs H. & A. Ad. in "Genera  
of recent Moll" seem to me poorly characterized.

H. A. Paley

Feb 5, 1883

Today sent card to Alm, and rec'd from  
Cumpton his Sedalia list. (Look inner at Long's today)

Rather cool. Frank, Hates assistant, says it's 93° below.

We separated some fossil Papae tonight, and  
some Luccinae. They seem to be oralis, lugginsi, and  
the old haydeni? I must look this matter up.

There seem to be three species of fossil Papae, —  
unuscorum, armifera and contracta? The Löss Eu.  
multilincata has quite a resemblance to some sp.  
of Leucochroa. H.A. H. H.A.P. J. H.A.P. J.B. Iowa

Feb. 18, 1883. ~~now~~ Saturday Evg. .... in

I've worked off book-or job forms nearly every evg., this week, and Cosper's "Pioneers" has taken a great deal of my unoccupied time, so that accounts for my neglect of my record here. — Today I received a box and letter from Lampson. It is a trump! Good fellow, writes jolly, free and easy, and is entertaining. More than all he sends good shells! I must make up a good lot for him in return.

Here is what Lampson sends — numbered as he has them —

- 651 *Luc. groenlandica*, Lea. (5) Ft. Worth, Tex.
- 652 *Luc. concordialis*, Gld. (5) Galveston "
- 653 *Eu. roemeri*, Pfr. (15) Ft. Worth, Tex.
- 654 *Eu. exolata*, var. *minor*, (5) Eureka Springs, Ark.
- 655 *Eu. livida*, Gld. (5) Ft. Scott, Kansas.
- 656 *Eu. albolinea*, var. *alleni*, ~~Osborn~~ (3) Eureka Springs, Ark.
- 657 *Bulimulus schiedeanus*, Pfr. (10) Ft. Worth, Tex.
- 658 *Tachea hortensis*, Müll. (10) England.
- 659. — larva — (15) Eureka Springs.



- 660 *Patula stingosa*, Gld. (3) Mammoth, Cal.  
 661 *Sten. labrosa*, Gld. (7) Eureka Spr. Ark.  
 662 *H. orbiculata*, Day (5) Denison, Tex.  
 663 *Poly. Texasiana*, Hor. (15) Ft Worth, Tex.  
 664 " *dampsoni*, Gld. (10) Eureka Spr.  
 665 " *jacksoni* Bld. (3) " "  
 666 " *moorea*, Gld. (5) Ft Worth, Tex.  
 667 " *torfueleana* Lea (5) Denison, Tex.  
 668 *Trid. fallax*, var *minor*, (5) Eureka Spr. Ark.  
 669 *Vit. pfrifferi*, Newc. (5) Oway Co. Cal.  
 (9550 ft. high)  
 670 *Gom. cubica* Auth. (3) Sedalia.  
 671 " *pallidula*, Auth. (?) (2) White river, Carroll Co. Ark.  
 672 " *plebina* Auth. (5) Roaring R. Spring, Barry Co., Mo.  
 673 *Pluricera subulna*, var *minor*, (40) White river, Ark.  
 674 *Limnæa caprata*, Day (20) Ft. Worth, Tex.  
 675 *Sph. aurum*, Prime, (5) " Pierce City, ~~Tex.~~ Mo.  
 676 *Pisid. additum*, Hald. (?) (30) Eureka Springs Ark.  
 677 *Physa gyrina* Day (38) " " "  
 678 " " " (5) Sedalia, Mo.  
 679 *Anaxylus tardus*, Day. (10) " " "  
 680 " " " (30) Eureka Spr., Ark.  
 681 *Ammoda orbiculata*, Lea, Sedalia, Mo.

Total, { 81 species, 372 specimens,

minus 12

69 species new to me.

Feb. 11, 1878

This a.m. called on B. Thimble  
late in forenoon. Comed him some  
*Polygyra* &c. He is going to put  
up a lot of his northern things for  
myself & Sampson. I've put  
up a nice lot of sh. for him  
this aft. here is the lot.

*Lac. lignum*, 9, 2a Cy.

*Lim. palustris* 12, (no. 307)

*sumaria*, 10 porr.

*Physa gyrina* 30 from Catfish; 23 Caprata pond, & a  
hand full from downfluss, old ditto.

*Pl. trivolvis* 15 Caprata pond,

*M. Eracutus*, 10, porr.

*Hyeculta*, 50+

*Campeloma* 10,

*Pl. subelana*, 30,

*Am. pallida* 5 from Lake Champlain

" " 25 " " Spitt? old ditto.

" *grana*. 25,

*Sonolopha* *magnum*, 50,

*magnum*, 1. juv.

about 300 specimens, so far, with  
B.S.'s lot of the Corbiculidae yet to put  
up.

Monday, Feb. 11, '83.

Tachya

Shell heliciform, globose, rather  
turbinated, apex obtuse, 5 whorled,  
columnella narrowly perforated,  
perforation covered in adult by reflection  
of peristome, lightly wrinkled,  
banded or not. Aperture quite  
oblique, broadly lunate, ~~from~~  
peristome expanded <sup>with a</sup> very much  
thickened <sup>rim</sup> within, extremities  
not approaching, columellar margin  
thickened and straightened within,  
somewhat as in *Lae Acares*, a  
light callus on parietal  
wall. Body-whole very large  
globose,  $> \frac{3}{4}$  length of shell,

Fig. 36.



Fig. 37.



Fig. 38.



Tachya hortensis, Müll. light callus on parietal  
England. Body-whole very large  
globose,  $> \frac{3}{4}$  length of shell,

deflected at aperture. The columellar portion of the  
peristome reminds one instantly of *Acares*. It is  
appressed to base of shell precisely as in that genus.  
The periphery is well rounded. The adult shells



seem at first sight to have the lip reflected, but this is only seeming, and results from the thick rim of enamel deposited just within peristome. The shells seem to me to have a distinct European facies, more like Acarus than any other genus I'm acquainted with. Indeed the relation here is very close, I believe, Juv. have columella like a Euparypha, somewhat.

"~~~~~"

An index of heliciform genera figured and described in 1882 and '83.

(Exclusive of the Vitrinea.)

- 1 Xerophila. — Jan. 11. 1883. (Vol. II.)
- 2 Tachea. — Feb 11, 1883. (Vol. III.)
- 3 Patula. — Carinateformis. July 8, 1882. (Vol. I.)
- 4 (H. rareguttata, Maisey, type) July 5, 1882 (Vol. I)  
figured & described.
- 5 Trochomorpha. — (T. marginata, Pfr. fig. & des.) July 4, '82. (Vol. I)
- 6 Leucochoa. — July 3. 1882. (Vol. I.)
- 7 (H. lais, et extensa, Pfr.) July 3. 1882 (Vol. I)  
fig. et described.
- 8 Euparypha. — July 3. '82, (Vol. I).
- 9 (H. arenosa, Brög. fig. et des.) July 3. '82. (Vol. I)
- 10 Acarus. — June 30. 1882. (Vol. I.)

11.

(*H. capitata*, Emert. fig. et des.) Jan 11, 1883, (Vol III)  
probably = *Eupanglia*.

12

(*H. variabilis*, Drap. fig. et des.) Jan 11, 1883. (Vol II)  
probably = *Inticicola*.

Thus about 11 or 12 Genera have been  
at various times investigated & figured, mostly  
by several figures. I add here the other  
genera I'm familiar with from my own  
specimens, — *Stenotrema*, *Uresdon*, *Polygyra*,  
*Tridopsis*, "*Dorcasia*", "*Aglaia*", *Aristata*, *Glyptostoma*,  
*Tallonia*, *Strobila*, *Helicodiscus*, —

(Type "*H. megaregoni*" Cox.) — This gives me 23 or  
24 genera of heliiform "*Helicea*", about 1/2  
of them figured, { Another genus, or possibly a sp. of  
*Acanus*, was received by Shuck. see no. 205

Feb 12, Tuesday Evg. ~~~~~

Rec'd from Bohmiller S. these —

682 <sup>65</sup> *Buhmilleria megasoma* Say, (11) Forest City, La.

683 *Seq. aringera* Say, Hardin Co, La.

684 *Anc. rivalans* Say Cedar Rapids, Ia.

- 685 *Ph. sutulera* Lea. Cedar Rapids Ia  
 686 *L. humilis*, Say. " " "  
 687 *Lac. higginsi*, ~~Bld.~~ Hamilton Co. Ia.  
 688 *F. subaenaria*, Lin.  
 689 *Mes. multineata*, Say, (21) Elora, Ia -  
 690. *Bulmus hyssorum*, Lin. <sup>a lot from Winnebago Co. Ia. of</sup>  
<sup>old coll. L. D. W. = old no.</sup>

Finished putting up Sangsoun's lot.  
 I wrote a letter to him.

Feb 18, 1883, Sunday Evg. Just a week  
 since last entry. I sent off that package  
 to Sangsoun, with letter. Haven't heard  
 from ~~him~~ yet! Must write to him again.  
 Last Sunday was very warm, and since  
 have had several days of rain and mist.  
 River rose up just over bank on  
 this side. On Friday (I believe) about  
 11 a.m. it changed to quite cold, and  
 has frozen since, until today, now milder  
 and melting some. But nearly all



of the deep snow that has covered  
the ground since Dec. is left. (We  
have had hardly a warm day till last Sunday  
since Dec. 6), (Rec'd) \$10.00 Sat. evg, \$9.00 work before)  
(We've had no plate nor telegraph since Friday)

The Ohio river has been extremely high -  
65+ ft. - have really been anxious about  
G.W. Will write to him tonight I guess.  
H.P. HAP HAPing Labing

Tuesday Evg. - Feb 27, 1883

Will last week had a "funny" job  
with "Holstein co", Sat. at Sun. was just  
"Krank", and am not quite over it yet

Today had another pressman - from Chicago  
a "dandy" named Jewett or Jewell, good  
workman, I guess. Morris got fired  
last Sat. evg.

who next?

Rec'd \$12.00  
Sat. evg

Feb. 27, '83 --- Got a card from Lampson last week, and ~~a~~ letter from AGU, Saturday. - The latter was.

March 1, 1883. Beautiful day! Heard first robins of the season singing this morning, and also, perhaps *Lialia* and wittering of purple martins. Yesterday wrote to AGU and mailed letter.

"H. mcgregoryi, Cox.

One of the most curious heliciform shells. Allied to none of the genera I have represented in my coll.

Fig. 39.



Fig. 40.



Fig. 41.



Shell heliciform, flattened, discoidal, whorls 10, equally visible above and below, supra-peripherally carinated, shining and rounded below, slightly wrinkled above, <sup>+ flattened descending at aperture.</sup> Aperture subquadrate, flattened above, rounded below, very oblique. Peristome expanded, thickened. Shell nearly plane above, saucer-shaped below.

The peristome is very much like *Macrocyclus* in structure. The upper outside, angulate, produced forward. A queer and interesting shell. Quite light in texture, - yellowish horn colored.

Fig. 42.

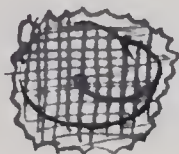
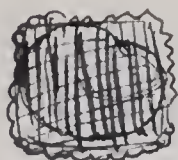
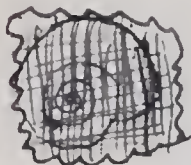


Fig. 43.

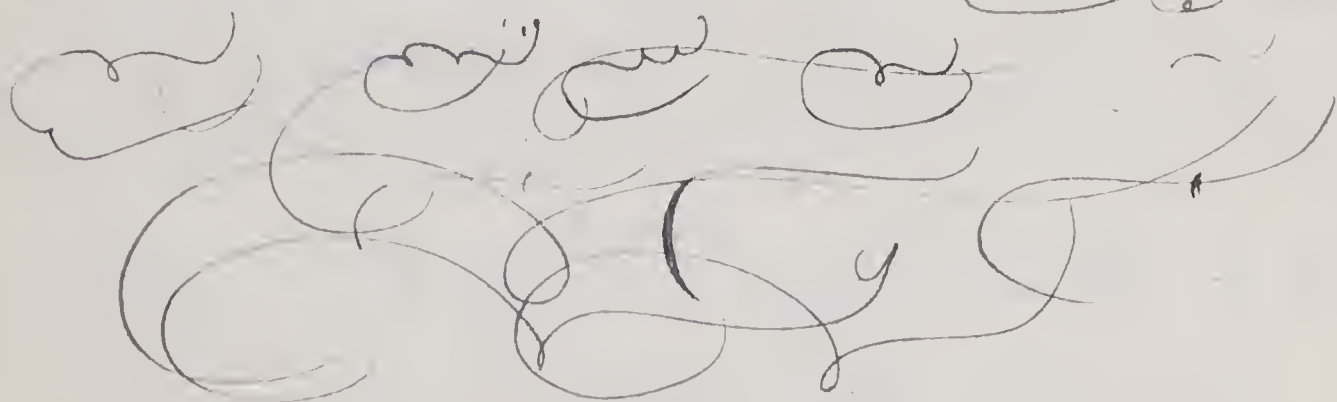


# Dorcasia

Gen. char. — Shell heliceiform, globose, narrowly perforate, white with translucent bands, (spiral) whorls 5, rather rapidly increasing, with transverse wrinkles of growth, very slightly descending at aperture, Aperture broadly lunate, slightly oblique, peristome slightly expanded, very much thickened within, ~~and~~ <sup>as a</sup> ~~remote~~ <sup>remote</sup>, but approaching, subreflexed at columellar

extremity, umbilical region slightly indented, a slight ~~furrow~~ <sup>constriction</sup> behind lip.

Suggests build these shells have slight resemblance to Euphyra. They agree in slight obliquity of aperture, general shape of shell & aperture, umbilical characters, and rapidly increasing whorls. The texture of shell is very different. Libby





Friday, March 2, 1889. Fine day again. — a notable event this winter, more Turdus. River rose nearly to foot of hill on this side since yesterday morning. Ice still in, not much broken up. ell I haven't heard from anybody for a week!

Fig. 44

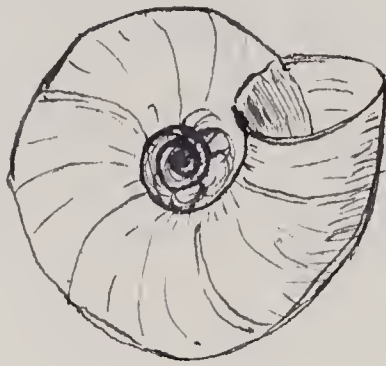


Fig. 45

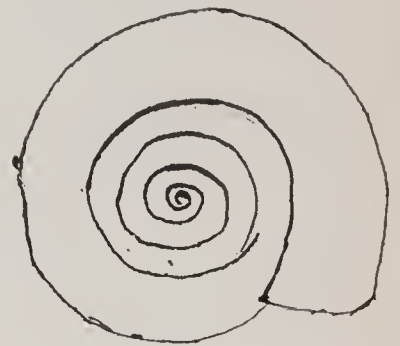


Fig. 46



Fig. 47



Glyptostoma newberryanum, W.B.B.

Coll. H.A.P. - No. 110.

S. California.  
(ell)

Glyptostoma - char. —  
Shell umbilicated,  
orbicularly flattened,  
obliquely wrinkled,  
rather thin, deep brown,  
whorls, rather rapidly  
increasing, not at all  
deflexed at aperture,  
well rounded,  
Aperture roundly  
lunate, slightly oblique,  
somewhat wider than  
high, (fig. defective here)  
Peristome thin, sharp,  
simple. (Its <sup>lower</sup> extremities  
approaching slightly.)

A light parietal callus, nearly transparent, or whitish, <sup>marked</sup> with  
very numerous microscopic spiral lines, a umbilical row shows  
all volutions.

Binney's figure of G. newberryanum is much more  
depressed than my specimen.

ell  
ell

Sunday, March 4, 1888.

(11:30 a. m.) Fine outside! Sialias yesterday and today, also Turdus.  
Very little snow left. Regular spring weather,  
since 1<sup>st</sup> inst. Recd \$10.00 last night.

The Aglaias et Ariantes in my coll. seem to  
fall into three principal groups, of about  
equal value. They may be briefly characterized  
as follows: —

**I.** Shell globose, conic; elevated; axis ~~imperforate~~ or sub-  
imperforate; umbilicus sometimes closed by reflection  
of peristome. — — — — Ariante, Leach.  
(Type, A. californiensis, Lea.)

**II.** Shell globose, depressed, umbilicate.  
— — — — Aglaia-ariante.  
(Type, A. normanum, Pfr. and A. parata, Pfr.)

**III.** Shell as in II, but with a tendency to carination, spire regularly  
conoid. Umbilicate. Body whorl more depressed.  
— — — — Aglaia, Albers.  
(Type, A. fidelis, et immaculata Gos.)

The first and second divisions differ very decidedly,  
judging from my material, in these points —  
General shape, the 1<sup>st</sup> being much more globose. Umbilical  
characters. I always having a very narrowly perforated axis.

sometimes covered by lip, while II has the axis decidedly umbilicate, even when umbilicus is concealed by reflection of peristome, a matter of only slight importance. On the other hand I can find very few tangible points of difference between "Aglaio-orienta" and Aglaia, although they may perhaps always be distinguished by general aspect, and it is on this ground that I make the separation. All my conclusions are drawn from an examination of these species,—

- 1 Arionta californiensis, Lea,
- 2 " Kelletti, Fbs
- 3 " nickliniana, Lea.
- 4 Aglaio-orienta mormonum, Pfr.
- 5 " drapetithousii, Desh.
- 6 " indiculata, Bin.
- 7 " exarata, Pfr.
- 8 " arrosa, Gld.
- 9 " Townsendiana, Lea.
- 10 Aglaia fidelis, Gray.
- 11 " infumata, Gld.

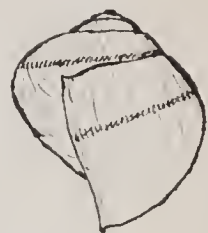
11 species, distributed in the three genera thus—

Arionta, — 3  
Aglaio-orienta 6  
Aglaia — 2

Fig. 48.



(49.)



(50)



(51)

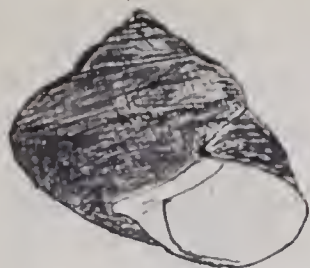
Arionta californiensis, Lea.

A. nickliniana, Lea, is a thicker shell, with less globose body whorl, smaller aperture, and more oblique peristome more expanded & thicker, one more whorl, &c.

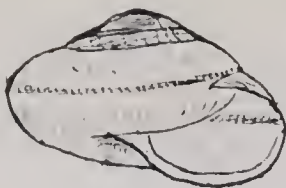
The only other species group of this group that I have, A. kelletti, is so different that I give it a separate illustration —



(52)



(55)



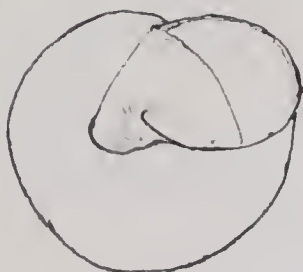
(53)



(56)



(54)



(57)

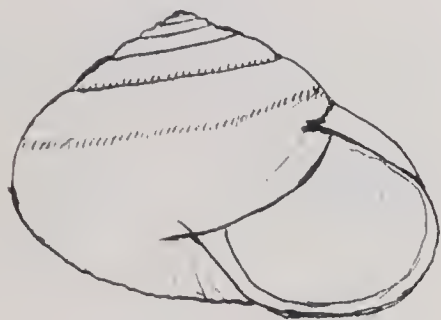


Aniuta kelletti, Forbes.

Aglaioaniuta monomma, Pfr.

more or less confluent  
in numerous rows

(58)



(59)



Aglaioaniuta arrosa, Zlot.

Aniuta kelletti is a very thick, heavy shell, compared with its allies californicus et nicholsoni.

Its aperture is very oblique, pendulous briefly but broadly reflexed and appressed over umbilical region, rendered continuous by a heavy (for this group) deposit of enamel on parietal wall. Shell mottled & clouded with brown, with a cloudy supra-peripheral revolving band. Cloudy flecks of white or cream color are

revolving fascia, whorls 5, deeply deflexed at aperture.

Aglaioaniuta monomma, Pfr.

selected as the type of the genus, is much the same shape as Ues. profunda, Say. It has  $5\frac{1}{2}$  whorls, slightly deflexed at aperture, Epidermis quite smooth, polished, regularly & finely wrinkled, without special indentation, as in most aniutas. It is

rich brown in color, with a colorless fascia bordering the supraspherical band on either side.

A. dupetithoussii, Desh., differs in being 6 whorled, more elevated and conic, darker color, and higher, narrower aperture. Heavier texture, a closely related shell.

A. tuniculata, is quite a different thing. Globose, light, narrower band with much fainter colorless fascia bordering it. Surface covered with minute indentations, etc.

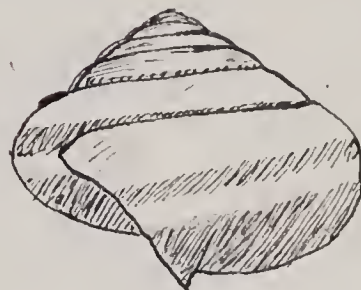
A. exarata, Pfr. is the extreme of the peculiar indentation seen in western shells. It shows little trace of regular oblique wrinkles or striae, but is covered with a network of cream white wrinkles on a nearly colorless ground.

The rather wide fascia is deep brown, whorls 6, somewhat deflexed at aperture. Lip much more expanded than in most species, slightly more than dupetithoussii. This is perhaps the key to the

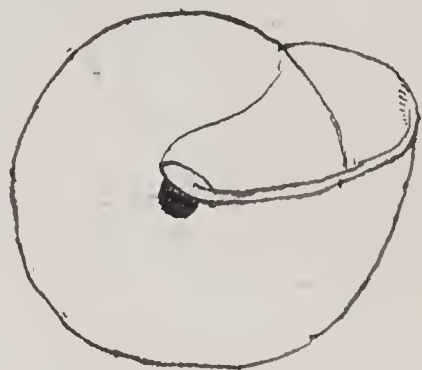
(60)



(61)

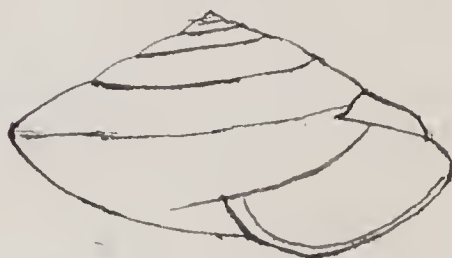


(62)



Aglaia fidelis, Gray.

(63)



Aglaia infumata, Desh.

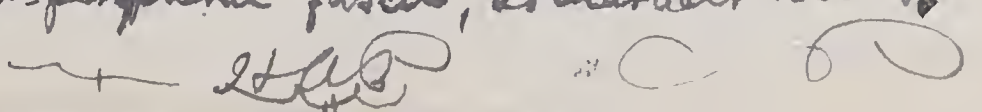


curiously developed lip of next species.

Aglaio-arioluta Townsendiana, Lea. At first sight one would certainly think this shell a Mesodon. I did so at first, (as witness June 24, '82, Pt. I) G.W. Tryon, in his Terr. Moll. considers it as such. But when studied with such shells as exarata, for one sees the resemblance. Both have much the same color, — yellowish brown, like the Mesodon etc., but in exarata the color is obscured by the very numerous whitish wrinkles, which are fewer in Townsendiana, which has more regular striation.

The shape of aperture is much the same, but Townsendiana's is flattened by the internal thickening at base. The peristome of the latter is more broadly reflected, and flattened, whiter, + heavier. Between these two shells lies just the difference of an expanded and an reflected peristome, and Arioluta shows how the Helicodonta peristome type of lip originated.

---

In one other respect A. Townsendiana has the aspect of Mesodon, — that is, absence of the supra-peripheral fascia, characteristic of the Ariolutas. — 



Aglaia fidelis, Gray, is a beautiful shell, with nothing of the sculpture of arivata of the exarata type. It is more like the polished surface of dupelithonensis etc., but even more glossy. It appears black unless held up to the light, when it is a lovely wine color. The supra-peripheral fascia is same color, with a white opaque fascia of nearly equal width below it. Above, the whole is light colored. Spire conic. Lip narrowly curved over — or reflected basally.

A. infumata is similar, unicolorous, dark, periphery creniated. It differs in epidermis, also.

The other species are — { Aglaia hillebrandi, Guss.

Arivata intercis, W.B.

" reducta, W.B.

" steiriana, Guss.

Aglaio-arivata apressana, Guss.

~~steiriana~~, Guss.

ramantosa, Guss.

corpentini, Guss.

seguicola, J.S. Guss.

franki, Guss.

Aglaio-arivata diabolus, Guss.

" rupicincta, Guss.

" gabri, Guss.

Doubtful whether all these are real Aglaio-arivata. I judge from W.B.'s figs & descriptions.

March 7, '83. Wednesday evg. 9. p.m. clear

Haven't heard from Alw. nor Lampson yet! — nor anyone else, this week.

Wrote to W.H. Harrison the other day.

In looking over the '80 vol. of Am. Nat., in bindery, I found in "Record for Recent Moll. for 1879" — (W.H. Dall) — that the H. circumcarinata — was described in Nov., 1879, by Stearns, as "H. var. circumcarinata", Stearns, and, from Dall's remarks, he seems to think it allied closely to mormonum, Ph.!!  
I can't see it. (See July 8, 1882, Vol. I)

March 8, 1883. clear

Thursday evg. clear

A lovely day! — The river is higher now, — up to foot of hills on the other side. There's an ice jam opposite the Observatory, but the river is clear as far as I can see up. It's on its perfectly placid surface

were reflected the great Maples and Birches  
wonderfully clearly. ~~at~~ This evening.  
Alice will start for Chicago tomorrow  
morning. — I forgot to record that  
in the place quoted from yesterday, it is  
recorded that W.B. erected a "gen. nov."  
for *Nitina latissima*, Lewis, i.e. *Nitinozozites*

My *Triodopsis* are ~~not~~ <sup>so small</sup> a fragment of the  
whole number of species of the genus, that  
I can't give any exhaustive survey of  
it, as in *Arionta*, etc.

I have these.

- 1 *Triod. obstricta*, Say
- 2 " *appressa*, Say
- 3 " *tridaculata*, Say
- 4 " *fallax*, Say
- 5 " *loricata*, G. & C.
- 6 " *copei*, G. & C.

These fall naturally into  
three groups, — 1<sup>st</sup> that of  
*T. obstricta* and *appressa*, 2<sup>nd</sup> of  
*T. tridaculata*, *fallax* and *copei*,  
and 3<sup>rd</sup> of *loricata*.

None of these have been figured nor rem-  
arked on except *T. tridaculata*, Say in *Ab. Ill.*  
(*Old Series*, vol. 2.)



March 11<sup>th</sup>, 1883, - Sunday, 8:30 p.m.

The last week has been very variable as to weather.  
vacillating between January and June in temperature.  
Today rather warm, windy. I have got my coll. a little  
straightened up. I haven't yet heard from AGW!  
nor Sampson, nor Hudson. I got some of those  
square wedding stationery boxes (at office), and  
packed these clams nicely in cotton in them -





*Trio. loricata*, G. B.  
Cal. (139)



69



70



66



71

*Trio. tridentata*, Say  
Cin., O. - (138)



67



74



75

*Trio. copei*, G. B.  
Beaumont, Texas. (140)



72



68

*Trio. appressa*, Say.  
var. Ga. (134)



76

*Trio. foliata*, Say, var.  
Barren Springs, Ark. - (668)



73

*Trio. obstricta*, Say.  
Tenn. - (141)



March 13, 1883.

Tuesday evg. —

Triodopsis, Raf.

The genus Triodopsis was founded by Requinne  
on specimens of Sa's "Helix tridentata", I L  
therefore is plain that the tridentata  
group must bear the name of Triodopsis,  
whatever ~~are~~ Tryon and others may name  
~~the rest~~ other sections of the genus.

Real Triodopsis are —

A. tridentata, decidedly umbilicate, margins of lip much  
approaching, shell moderate in size, unicolorous,  
Type — tridentata.

A.A. Shell small, ~~the~~ globose, narrowly umbilicate, 5-  
whorled, last whorl deflected at aperture,  
aperture tridentate, teeth minute, an internal tubercle  
at base, near aperture, as in Stenotoma (?)

Type — loricata.

AAA. Shell with umbilicus covered, or nearly so, by  
reflection of peristome at axis. — a lamellar  
basal tooth, with or without a tooth above,  
also, parietal tooth. Type, obstricta, appraeta, &c

It seems that Raf. made Triod. inflecta

the type of his "genus" Xolotrana. I can't  
see why Tryon refers the species of my  
group "AAA" to this genus, and the T. inflecta to  
"Isognostoma". Tryon includes also in  
Xolotrana the Mesodon with parietal tooth  
and lamellar basal tooth, such as elevata Volckm.  
My material is too limited to review the  
genus, and attempt a revision of its classification  
now.

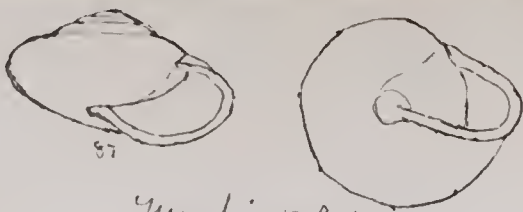
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March 14, 1883 - Wednesday.

10:30 + p.m. Have just finished Pl. II, New Series, of Mesodon, Ref.  
23 figs., 11 species. The air was warm & fine today, but stormy? (potential)  
now. Ice all out of river since Sunday, and river within banks on this  
& other sides. H. A.







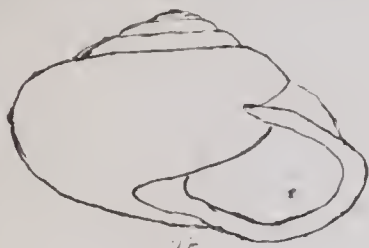
*Mes. divisa*, Gld. 88  
 Ark. - 135.



*Mes. albolaris*, Say.  
 Lebanon Springs, N.Y. - 506.



*Mes. devia*, Gld.  
 Oregon. - 136.



*Mes. principiana*, G.  
 Cin., O. - 131.



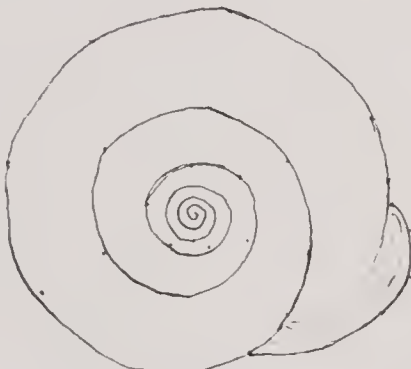
*Mes. albolaris*, Say.  
 Cin., O. - 127.



*Mes. eborata*, Say.  
 Cin., O. - 130.



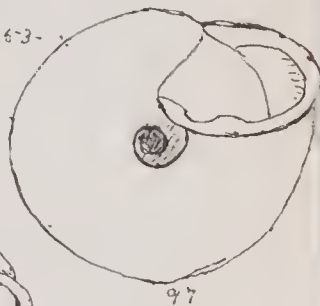
*Mes. attenu*, Gld.  
 Cereka Spr., Ark. - 656.



*Mes. major*, Binn.  
 Roan Mt., N. Car. - 132.



*Mes. rosmari*, Pht. 95  
 N. Car., Ark. - 653.

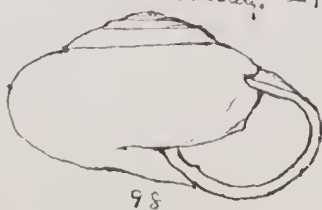


*Mes. profunda*, Say.  
 Iowa, etc. - 11.



*Mes. exalta*, Binn. var.

Cereka Spr., Ark. - 654.



*Mes. sayi*, Binn.  
 Ky. - 133.



March 16, 1883. Friday evg., 8 p.m.

The genus Mesodon seems to be divided into two groups of species, characterized as below -

I. Shell decidedly umbilicate, depressed-globose, aperture subcircular, or rotundly lunate, margins of peristome approaching, connected by a light columellar callus, sometimes armed with a small oblique paristomal tooth, a basal tubercular tooth on peristome.

Ulostoma.

Type --- Sayi, and profunda.

II. Shell with columella narrowly perforated, perforation covered by reflection of peristome, or open, aperture variously formed, with a lamellar basal tooth, or a basal thickening, or simple at base, columella with or without an oblique denticle, sometimes a slight tooth on peristome above.

Mesodon.

Type, --- atlabris, &c.

The first section is small, containing only three species, I believe, - viz. profunda, Sayi, and chilhowensis. M. profunda has a much more oblique aperture than Sayi, with peristome and basal tooth far better developed.

The shell is heavier and more coarsely striate,  
and has no parietal tooth in profunda. My only  
specimen of chilhowensis is too poor for description.  
Sigs. 96 to 99, Pl. III, newdeni.

~~These~~

Mesodon as restricted on last page, is  
divisible into a large number of groups  
of approximately equal value, not very well  
characterized perhaps, but <sup>well</sup> enough for my  
purpose, until I can get the other  
species for study.

- (1) Shell rather large, globose, subimperforate, or imperforate,  
a thickening at base of aperture, with or without, parietal denticle,  
umbilical perforation minute.  
allobonis, allenii, major, exobeta, multilineata, (divesta, ??)
- (2) Shell moderate, very globose, subimperforate or imperforate,  
aperture very rotundly lunate, not toothed, no basal  
thickening to peristome, aperture rounded below.  
clausa, p. mitchelliana.
- (3) Shell <sup>globosely elevated</sup> imperforate; aperture with a lamellar tooth  
at base, with or without a parietal tooth,  
Spire more or less elevated, dome shaped.  
elevata, pennsylvanica.
- (4) Shell depressed-globose, imperforate or nearly so,  
with or without parietal tooth, no basal  
tooth.  
roemeri.



(5) Shell rather globose, columellar perforation covered partly by reflection of peristome, which is decidedly flattened or toothed at base; parietal wall toothed or not, shell dark colored, or luridate, western species,  
devia, columbiana.

The presence of a parietal tooth, or of umbilical fissure, upon which G.W. Tryon, in "Monog. Ter. Moll." founds his sections, it will be seen, is but a very slight feature in the groups above given, which are founded principally on the basal characters of aperture. Species of each of the groups presented above are figured on my "Pl. II. New series," drawn a few days ago, I began on it at 8 and finished about 10.

Today Preston called at Office. He leaves for home tomorrow. Believe well strike a scheme with him. He collected those Bulininaea at Forest City.

---

10. p.m. - B.  
10.10

March 18, - 1883. - Sunday, evg.

I have at last got my own Unions  
packed up. They fill 5 peach crates.

and several boxes. Here is the list.  
all coll. in 1882, of course. —

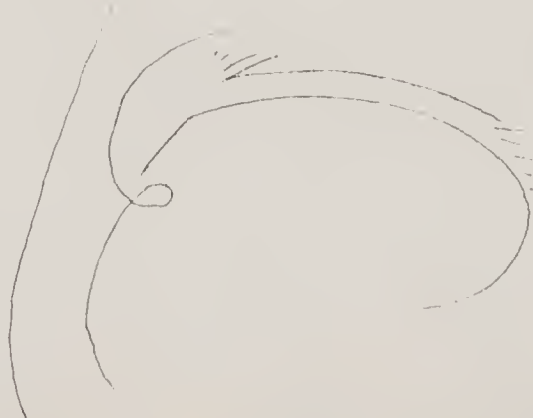
- 684 *Unio alatus*, Lea. var. *white-nacre*. (2) Aug. 19, 1882.  
685 " " (Typical) (5 or 6.) see 1882.  
686 " *laevissimus*, Lea. (11) part juv. coll opp. our house, see Aug. 17,  
687 " *gracilis*, Bar. (6) all over, also a few juv. see Oct. 1.  
688 " *fragosus*, Lam. (8) (& doz or so uncleaned) Also, 20 or so juv. all from Hoffman locality.  
689 " *rustulosus*, Lea. (30) (& 30 or so juv.) all over.  
690 " *metanevus*, Raf. (31) - mostly from Hoffman locality, with fragosus & c.  
691 " *coronatus*, Bar. (50?) part juv. see last sp. see Aug. 17, 19, 22, & also Sept. 20.  
692 " *aeolopus*, Br. (18) " " " " " "  
693 " *Trigonus*, Lea. (15?) & lot of juv. " " " " " "  
694 " " var. *colorata*, nacre. (20?) " " " " " "  
695 " *Solidus*, Lea. " " " (15?) " " " " " "  
696 " " (Typical) (20) & lot of juv. see Trigonus, no. 693.  
697 " *ellipsoides*, Lea. (25) mostly from *laevissimus* locality.  
698 " *eburnus*, Lea. (3 or 4) - Aug. 19, 1882. - Hoffman locality.  
699 " *tuberculatus*, Bar. (10) - all over.  
700 " *rectus*, Lam. - (10) Hoffman locality, just above dam.  
701 " " var. *purpurea*, nacre. var. see last -  
702 " *ligamentinus*, Lam. pink " " not common -  
703 " " (white) common all over.  
704 " *anodontoides*, Lea. (22)  
705 " *lunissimus*, Lea. (40 or 50) mostly from Hoffman locality.  
706 " *luteolus*, Lam. (15) common with *virginianus*, - Aug. 27, & not all over.  
707 " *spatulatus*, Lea. (25 or so)  
708 " *occidens*, Lea. (lots of juv.)  
709 " " var. *pink nacre*. (3), not common.  
710 " *pleiatus*, Lea. (30) all over.  
711 *Marg. complanata* Bar  
712 " *rugosa*, Bar. (5) Very common above dam. see rectus, not elsewhere.

- 713 *Uergy truncata*, Say (1 or 2) rare here.  
 714 " *hildrethiana*, Lea. ( ) — Sept  
 715 *Anodonta grandis*, Say (10) Turkey Cr. pond, — May 21, H. H.  
 716 " *corpuscula*, Cropp. (13) — river, see Aug. 13, 1882.  
 717 " *wardiana*, Lea. (dog) river — few.  
 718 " *formosacincta*, Lea (2.) Turkey & Perspectiva cracks. Aug. 13, '82  
 719 " *imbicillis*, Say. (1) Sept. '82.  
 720. *Unio verucosus*, Lea. (1) Hoffman locality, Aug. 18, 1882.

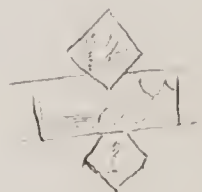
They are well packed in cotton, and out of the way for  
 a while. I also washed out my lot of *Unio*  
*parrus*, Bar.

This moon was lovely, but colder now. Had a  
 mind to go out a while, but hadn't time.

I do wish that *ASW* would write, sometime.  
 He is the slowest thing I ever heard of.  
 If don't hear from him this week, I'll  
 prod him up again.



~~~~~







March 18, 1883,

D

W. B. Brainerd

March 19, Monday evg. -

Rec'd a card from Hudson today.

We have got Fox, sent so long ago. Wrote to him tonight, & to Miss Hecox, also, acknowledging receipt of the Calliostomas.

I'm trying to collect information about all the Terr. Uroel. published since the publication of W. B. Brainerd's "Terr. Uroel" in July, 1878. - or in fact in Jan. 1878, for the subject is brought up to that

data as my Bimby states in preface.

-Here is the list, so far. —

- 1 ~~1~~ x *Trio. copei*, A.S.W. - 1878. Beaumont, Texas.
- 2 x *H. circumcarinata*, Stearns, 1879. Cal.
- 3 *Macrocybis henryhilli*, W.B. 1880. Olympia, Ore.
- 4 x *Zonites nugei*, W.B. 1880. Roanoke, U.C.
- 5 " *andrewsi*, W.B. 1880. " " "
- 6 *Mesodae andrewsi*, W.B. 1880. " " "
- 7 *Zonites upsoni*, Calkins. 1880. (Dec.) Rockford, Ills.
- 8 *Patula bryanti*, Harper. 1881. U.C.
- 9 *Helicidiscus fimbriatus*, A.S.W. 1881
- 10 x *Poly. sampsoni*, A.S.W. 1881. Eureka Springs, Ark.
- 11 *Ariolimax becoxi*, A.S.W. 1880(?) Cal.
- 12 *Trio. levettei*, Bld. 1881 - Santa Fe, New Mexico.
- (13) *Angelita rowelli*, Newc. (See W.B. Zool. Hist., p. 20 et 206 - "Arionta")  
"4 miles south of Phoenix, Arizona," Princ. Am. Nat., 82.
- (13a) *Macroceramus pontificus*, not = *kieneri*.

Mar. 21. 83, Wednesday evg. -

Am pulling up some

sh. for Sampson.

1 *Sph. striatum* (9) 40 or 20. } 40, 317. }  
2 " *sulcatum* (?) doz. }  
3 *transversum*, (?) 40. - 40, 206. }  
4 *Luc. obliqua*, var. 20 or 30. - 40, 55. }  
5 *Staculca* doz. " }  
6 *Pupa unicolor*. doz. " }  
7 *Pardalium* - ? - 50 or 50. }

Also wrote postal to

him. Davenport heard from

(Evg.) of it! Bent for

Thyones "structural & systematic"

- 54. 83. Am yesterday for

some papers from Foste. - 50p.

March 23, '80. Friday Evg. —

Letter and small box from C.W.M. today.

He sends some sh., mostly marine, for identification. They are —  
(as he numbered them)

- 1 *Unio complanatus*, Sol. juv. (?) Warwick, Kent Co., R. I. "Taken  
alive more than 20 years ago."  
(3) Har. Bay Warwick. "*Sphaerium*"
- 2 *Læviocardium*?
- 3 *Nassa strobilata*, Say, (3) Har. Bay, Warwick R. I.
- 4 *P. campanulatus* (2) & *M. acuminatus*, (4) L. & B. Str. N.Y. ("*campanulatus*")
- 5 *Lucina dentata*, Wood. ("*aeniosus* sh., loc. unknown).
- 6 *Mosab. p. curvus*, Say Warwick. "light purple at first"
- 7 Small crab in *Nassa strobilata*, R. I.
- 8 *Mytilus* - (bluted) Roslyn.
- 9 (*Modiola implicata*, Say. (?) Quzechy Lake.
- 10 *Gyp. arenaria*, Lin? (1 1/2 poor) Roslyn. L. I., N.Y.
- 11
- 12 *Læviocardium*? ("I think a foreign sh.")
- 13 *Columnella avara*, Say. (4)
- 14 *Goniobasis nitella*, Lea. (?) - (6) "Tower shell," S. C.
- \* Nothing amounts to much except the
- \* last species. This is good - a n.s.



to me. Elongated, acute, apex perfect, white &  
convex, with deep sutures. all my specimens  
are bleached perfectly white.



I am not at all certain about the  
identity of it with rubella, Lea.

March 25, Sunday aft. —

Last night I brought home my rubber-  
boots from Office, intending to go on a little  
snail-hunt this morn. But when I awoke  
the ground was white with snow and the  
air was full of large moist flakes.

It is still snowing some (5 p.m.).

I've done little but get out a number  
of Linguals & gaws of M. profunda etc, from  
alcoholic specimens. Also picked over some  
shells, washed pupae, Amnicolas, etc.

1 Sunday evg. Mar. 25

In Polygyra I have about 15 species,

some; all principal groups. I have made drawings of P. 7-volva, cereolus, dorfilliana, & sampsoni, tonight on my Pl. III, new series. In my former classification of this genus, Oct. 13<sup>th</sup>, 1882, I divided "Dædoloche" into two groups, characterized thus:—

a. Basal tooth marginal, Peristomal tooth 3-angular, larger above.  
— anniculata &c. types.

a.a. Both lip teeth remote. Peristomal tooth subquadrate, white, Apertures reniform. — dorfilliana, jacksoni &c. types.

Now on closer study, it appears that neither dorfilliana nor sampsoni have the basal tooth of peristome "remote". It is as truly marginal as in any of the anniculata section. But instead of removing them to that section on this account I would make a new diagnosis to include the same species ~~now~~ then written under "a.a."

This group may be divided into two sections very readily, as follows:—

1. Basal tooth at margin of peristome, <sup>external</sup> no scrobiculations marking position of upper tooth. — dorfilliana & sampsoni.
2. Both peristome teeth remote. an external scrobiculation, marking position of lip tooth above. — jacksoni & hazardi.

March 26 - Monday evg. 9. p.m. ~~~~~

The two species I have of the section "C" of the Cambridge group of Polygona, (Cope last paper) are quite distinct. The base of sampsoni shows much more of the antepennulate whorl than dorfuilliana, and the vination is larger, has at least  $\frac{1}{2}$  more turn. The aperture is more oblique. In both the basal tooth is on the margin of penistome; it is <sup>perhaps</sup> sharper in sampsoni. The tooth on penistome above is situated on the marginal thickening of lip, but is very much inflected, (as in Mio. copei, etc) giving one the idea that it rises inside of "penistomal" thickening, in both species. It is quite variable in size, one specimen of dorfuilliana having it low, broad, while in others it is slenderer. The parietal of sampsoni is broader, flatter, and otherwise different from dorfuilliana. dorfuilliana has a more inflated body whorl. Since writing above, I've examined my other lot of Poly. dorfuilliana. They have both lip teeth as truly "remote" as either of the other sections. This lot (169) is labeled "Ark." by GSW. The others are Denison, Tex. (667). F.A. Sampson. The last whorl is coarsely striated a short distance behind penistome, smooth elsewhere, in both species.



March 28/97. ...  
... last egg, finished up to fig. 20 ...  
... added 12 figs. of typical "Liedelschultzei". - 34 figs.  
for this plate. ... (H.A.S.)  
...

A light snow was falling this morning when I  
got up, and snowed till noon, about, melting  
this ... Reid cord from Sangre this morning,  
and send him cord, as J. H. Pillsbury last tomorrow.

"

March 28, 1897

The *Polygona*, *lagardi*, & *jacksoni* are much  
more distinct in character than the  
*L. sangre* & ~~the~~ *lagardi* and *jacksoni*.

*lagardi* is more depressed, not so smooth  
below, shows more of the last whorl of  
umbilicus, in much the same way  
that *sangre* differs from *lagardi*.



Mar. 25 '64



100



104



101



102

P. 72 volva, var.  
vox volvis, Pfr.  
Fila.



105



104

Poly. 72 volva, Say.  
Fila.



Poly. 72 volva, Say.  
Fila.



109



109



106



Poly. dorfilliana, Lea.  
Dinison, Texas.



107

Poly. cereolus, Euabl.  
Fila.



Poly. cereolus, Euabl.  
Fila.



110



111



112

Poly. sampsoni, Agassiz.  
Euzeke Springs,  
Ark.



117

agassizi, 1847.



118

jacksoni, 1862.

Poly. sampsoni, Agassiz.  
Euzeke Springs, Ark.



113



114



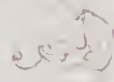
119



120

Poly. sampsoni, Agassiz.  
agassizi, 1847. dorfilliana, Lea. Sampsoni, Agassiz.

Poly. sampsoni, Agassiz.  
Euzeke Springs, Ark.



115



116



Poly. sampsoni, Agassiz.  
Euzeke Springs, Ark.



Both show much the same arrangement  
spiral peristome. The peristome of  
jacksoni is much thicker than of hazardi  
and is white, like the parietal wall  
white that of hazardi is same color  
of shell, — brownish-horn color.

The differences in armature of spines  
are shown in my Plate III.



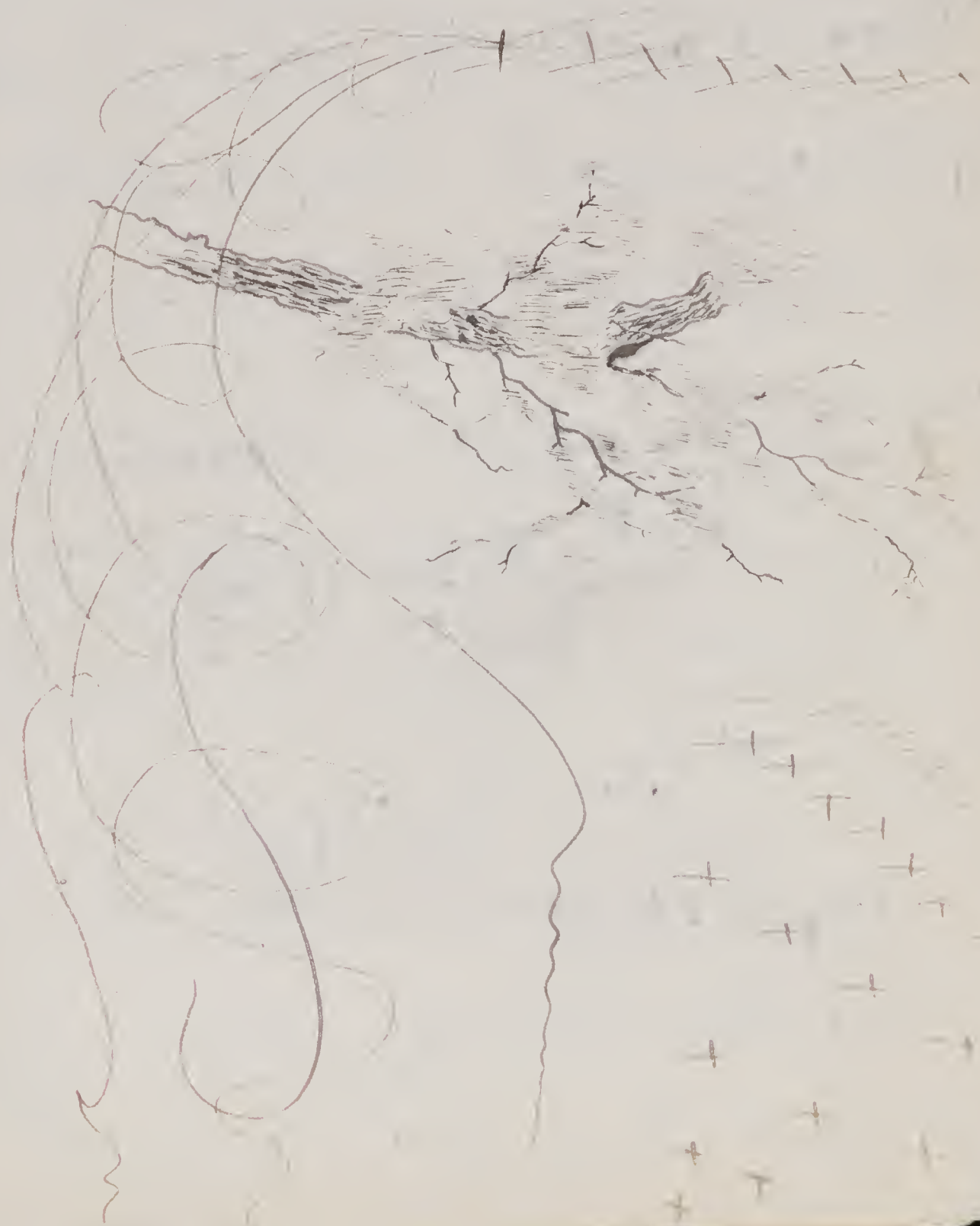
Of the other Polygyrae, mesomphala  
+ lasina are very closely related, but very  
distinguished by the more closely revolute whorls  
of the former. It is usually smaller  
also. I have a form sent by Mr. [?], which  
is dark brown in color, and much smaller  
than Simpson's shells. Polypristula is  
related to none of the others I have  
unforvis and uoulifera are very closely related,  
may be compared in this respect to mesomphala  
and differ from auriculata very decidedly  
although similar, but with much smaller aperture.



From "The Century" - 1881.

W. W. Wood

March 28, 1883. Eggs





March 30, 1883. — Eug., Friday. —

Snow nearly all melted off. Rec'd  
Tryon's "Structural & Systematic Conch."  
yesterday, ~~but a card from Tryon~~ I haven't  
heard from anyone for a month nearly.

Tryon is good! I've found out a lot  
of things about Ter. Moll. from  
it, among them the name of

my *H. marginata*, for --- *Trochomorpha*.

etc. . . . . { But the shell B.D. gave me from the B.M.  
is *Rangia*, not *Pargia*.

— — — — — V. J.

April 1st to Sunday evg. — — — — —

"My first essay in the field" — — — — —

made this morning. After a late  
breakfast & more or less dawdling

round the house, I donned rubber  
boots, and tramping paraphernalia,  
and with a supply of coll. bottles  
started for the "cut" and brick-  
yards. Very little out of the usual  
species occurred. *Stoculla* in small  
numbers. Some fine *Ducum*, *limosa*  
all *Merodon* found were broken.  
A few *Pupa* & *Tallonia pulchella*,  
these last all from "cut" yard  
accompany. All the northern regions  
are covered with snow and ice  
yet. But 'twas quite warm on  
southern hill sides,

April 11th 1883, Tuesday evg. 9:30 p.m. —  
Raining! — Quite warm since Sunday. Yesterday  
evg. saw that a few ft. of bar, opp. the mine,  
is exposed for first time since the road cut.  
In making out a list of my coll., note

your date then. any one attempted to  
to find some "genuine" things in my  
got numbers, such as new shipping from  
1637. 167. Lots of omissions too.

W. L. G.

April 7<sup>th</sup> / 1883, Cal, Eoy.

How could have heard from you this  
week! I have just finished the pre-  
liminary list of shells, Land & Fresh-water  
species only. It is very imperfect, being  
merely a reflection of the "Cabinet-numbers"  
upto no. 726. (Rec'd 8.50 tonight) The list has  
now 338 species.

W. L. G.



April 5th Sunday 229,

This morn was very cold and sh<sup>y</sup>.  
But I started out for the 2<sup>nd</sup> locality  
at north end of Dubuque str. This is  
after all the best of all the localities  
I've visited. It differs from the  
mucky yard & "cut" localities in the  
great predominance of *Italica*, *P. cooperi*,  
*L. lineatus*, *P. striatella*, *U. multi*, *Sue.*  
*avara* & *obliqua*, *Pupa muscorum*, *Conulus*  
*fulvus*, *Ital.* *occulta* (n), are the only  
shells found here. Of these, *Pat. cooperi*, *striatella*,  
*L. lineatus*, *Pupa muscorum* are very characteristic. The  
*occulta* and *conulus* are also found in great  
numbers. In the "Cut" (See April 1/83, etc.)  
are found *Sue. avara*, *obliqua*, *U. multi*, *Pat. cooperi*??  
*striatella* & *L. lineatus* (Succ.) *Pinnaea*, *Tallonia*, *P. crassa*,  
*Sphaerium*, *Conus*, *U. multi* etc.

The Prater gl. beds are very rich in Hocaulta,  
and Mesodon.

Papa & Co. The small bed on Prairie du Chein road contains  
principally Himantozoa.

This last may be related to "Cut", which  
I propose to call "Vallonia beds," calling  
the Danger st. locality "Helix beds," and the  
Prairie du Chein locality "Lunospira beds."

There is a note on a <sup>tt</sup> cir-Turkey Cr. locality on June  
11, '82. It contains "Hocaulta, Succinea, Mesodon,"

<sup>tt</sup>  
Small exposure just north of Rapid creek, 1/2 mile w. of bridge, contains  
Suc. ovata. nodules, also. vide April 17, '81.

<sup>tt</sup>  
My first visit to "Vallonia beds" was April 27, '81, <sup>g.H. for</sup> ~~map~~ map of  
the locality, and remarks on fossils, (Suc. ovalis?)

<sup>tt</sup>  
There is also an exposure <sup>east end</sup> near ~~Bridge~~ <sup>Bridge</sup> over Quarrier  
sch. Cher branch B.C. R. & H. R.R., vide

<sup>tt</sup>  
Smiley's hill locality contained (vide July 1, '81,) Hocaulta  
Suc. ovata, Succinea, Mesodon, Z. lineatus, P. muscova.

<sup>tt</sup>  
West-side locality, see next page -  
All I have time to look up now. A good lot  
taken, spite of the intense cold, not quite frozen

It is now just over 1000 ft. The aft-  
it cleared up and became quite pleasant  
and warm. I took boxes + went to the  
Slaughter house Pupa fallax place, and got  
a very fine lot of Pupae. They were mostly  
crowded in groups of 2, 3, or 50 75 or more,  
apertures covered by a blackish diaphanous  
H. H.

April 9, '83. Monday eve. H

I received a letter from E. H. Hudson  
this noon. He is about to send me a box  
of sh. H

There is a Low exposure, with successive  
on west side of river, opp. Observatory,  
where road comes down hills to  
the bridge, I found it about Oct. 19,  
'82, but can't now find any note  
relating to it. H

Neither Hoculla nor P. cooperi are  
common now, as they were 2 or 3  
years ago, I think. H



1.

-



# *Polygyra* in my collection

1888

1888

1888

*Polygyra* Bay char. Shell heliciform, depressed, plani-  
orboid, 5 or 8 whorled; aperture subuniform, or sinuous, with  
v-shaped parietal fold; Peristome continuous, r. flected,

A. Shell discoidal, many whorled; whels visible below as  
well as above; parietal tooth simple, v-shaped; no  
teeth on outer lip.

(Thevrida group.) S.G. *Polygyra*.

AA. Shell depressed, 6 or 8 whorled. Umbilicus narrow, or  
a sinuous rimation, parietal tooth often very  
complex, outer lip with a tooth above and below.

S.G. *Acidobolus*.

a Basal tooth at margin of aperture; simple, curved,  
(as in *limosina*) or triangular, larger above (as in *limosina*).

b. Upper lip tooth "simple" or at least uncurved &  
concave externally. Parietal tooth connected  
with peristome above by an elevated lamina  
umbilicus minute. Type *Amalata*, etc.

bb. Both lip teeth at margin. Parietal tooth not  
connected above with callus. Aperture sinuate, rather  
simple. Umbilicus not minute.

Type *Testa*, etc.

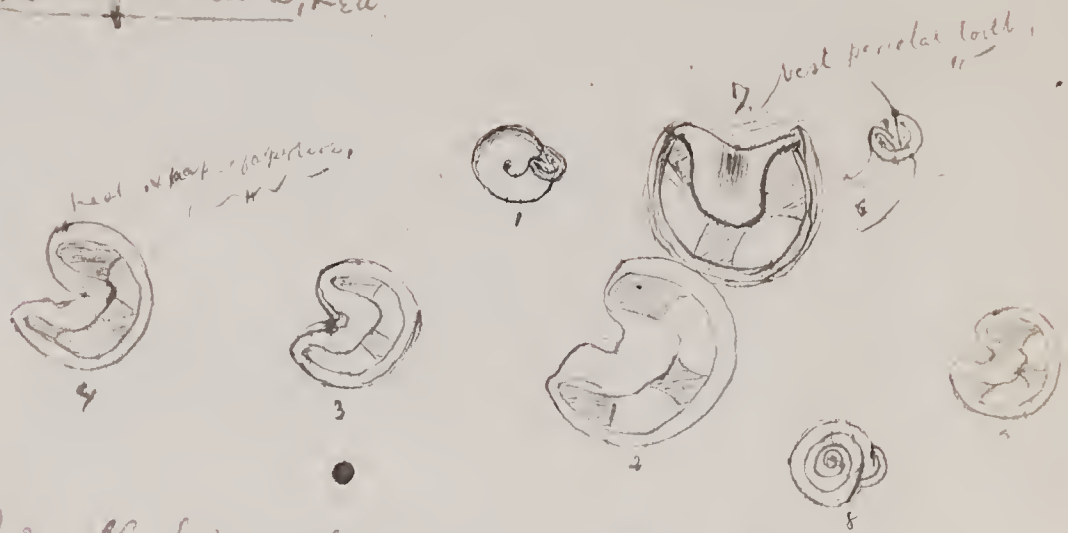
aa. Both lip teeth "simple" Parietal tooth not simple,  
white with elevated outer margin.

Type *limosina*, etc.

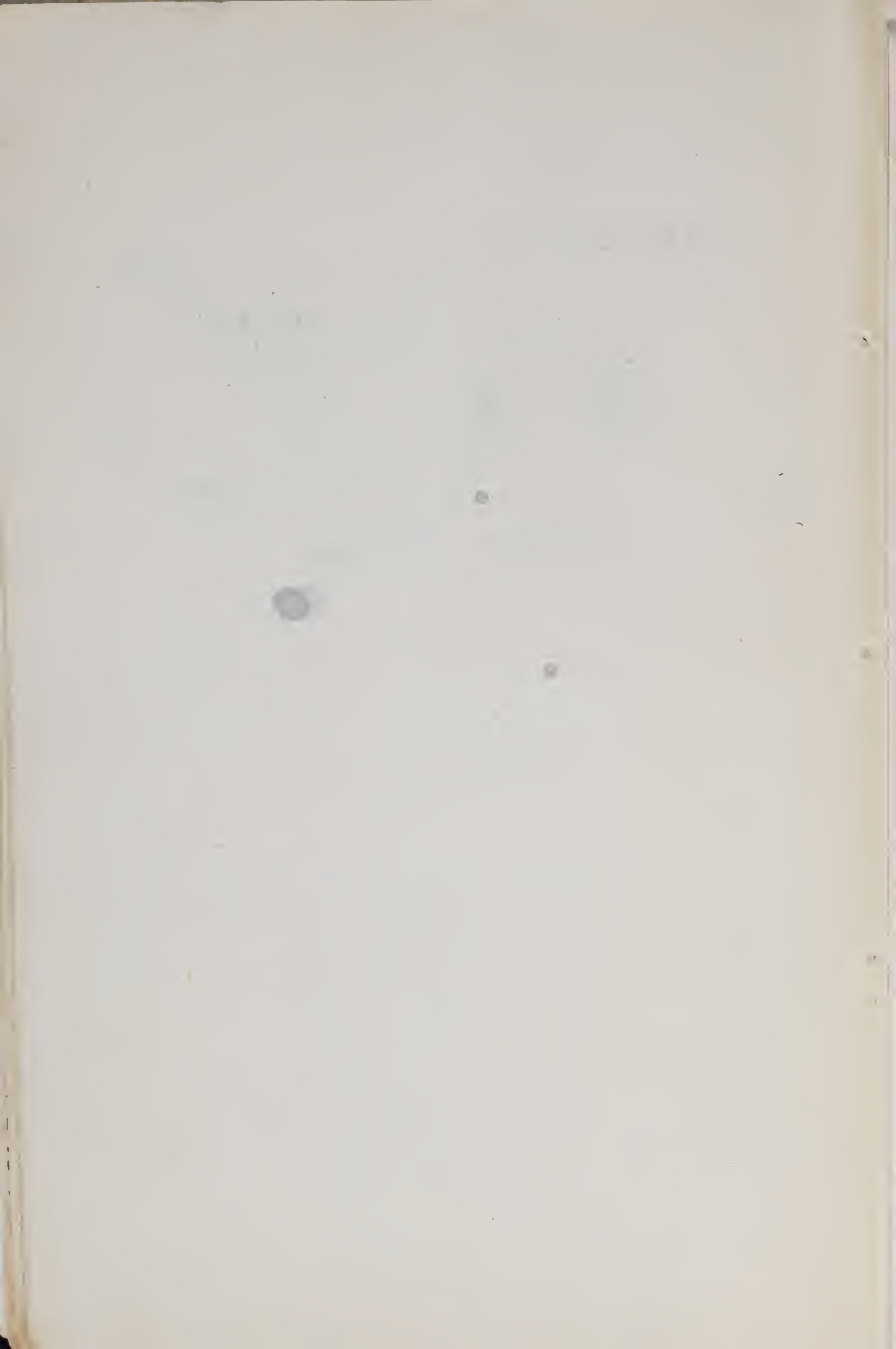


Having taken the *P. dorbiana*, Lea as the type of this group, we will describe it first, & compare any other species with it.

1) *Polygyra dorbiana*, Lea.



Shell small, depressed. aperture











*Chlorophyllum* ...  
*Chlorophyllum* ...

A. ... *Chlorophyllum* ...

II. *Chlorophyllum*  
*Chlorophyllum*

B. ... *Chlorophyllum* ...

II ... *Chlorophyllum* ...

II. *Chlorophyllum*  
*Chlorophyllum*

II ... *Chlorophyllum* ...

a' ... *Chlorophyllum* ...

*Chlorophyllum*

b' ... *Chlorophyllum* ...

*Chlorophyllum*

"*Chlorophyllum*"

b ... *Chlorophyllum* ...

a' ... *Chlorophyllum* ...

*Chlorophyllum*

b' ... *Chlorophyllum* ...

*Chlorophyllum*



a.

## I

2

2

a

24



cl

2

24

Q.



22

14

3

19

1

131

11

6.

72

10

III

|                       |                        |
|-----------------------|------------------------|
| Polymorphe, —         | Polimide de            |
| Polysomorphe —        | Polycarbonate.         |
| Polysynchrone —       | Polymère, Synchrone de |
| Phenymorphe —         | Phénolique de          |
| Phosphimorphe         | Phosphore à l'oxygène  |
| Pyromorphe, phase     | Pionnière.             |
| Pyro-synchrone, phase | Pyrochimique.          |





5 Clause H.P.

~~12~~ ~~multic.~~ "

~~11~~ ~~profunda.~~ "

~~127~~ ~~alba.~~ ~~abs.~~

~~13~~ ~~dillenae~~ "

~~129~~ ~~pennsylvan.~~ "

~~131~~ ~~elevata.~~ "

~~131~~ ~~mittchell.~~ "

~~132~~ ~~major.~~ "

~~133~~ ~~saigi.~~ "

134 ~~roemeri.~~ "

~~135~~ ~~diversa.~~ "

~~136~~ ~~devia.~~ "

~~137~~ ~~columbia.~~ "

~~138~~ ~~columbia.~~ "

~~139~~ ~~columbia.~~ "

~~140~~ ~~mes. calabris.~~ B.S. & C.

~~141~~ " " "

~~142~~ " ~~mult.~~ "Fa." B.S. & C.

~~143~~ ~~mes.~~ " ? ~~ced. rapids.~~ H.P.

~~144~~ " " ~~fossil.~~ Löss. "

~~145~~ ~~alba.~~ ~~calabris.~~ N.Y. B.S. & C.

~~146~~ ~~alba.~~ ~~calabris.~~ N.Y. B.S. & C.

~~147~~ ~~alba.~~ ~~calabris.~~ N.Y. B.S. & C.

~~148~~ ~~alba.~~ ~~calabris.~~ N.Y. B.S. & C.

~~149~~ ~~alba.~~ ~~calabris.~~ N.Y. B.S. & C.

~~150~~ ~~alba.~~ ~~calabris.~~ N.Y. B.S. & C.

~~151~~ ~~alba.~~ ~~calabris.~~ N.Y. B.S. & C.

~~152~~ ~~alba.~~ ~~calabris.~~ N.Y. B.S. & C.

~~153~~ ~~alba.~~ ~~calabris.~~ N.Y. B.S. & C.

~~154~~ ~~alba.~~ ~~calabris.~~ N.Y. B.S. & C.

~~155~~ ~~alba.~~ ~~calabris.~~ N.Y. B.S. & C.

~~156~~ ~~alba.~~ ~~calabris.~~ N.Y. B.S. & C.

~~157~~ ~~alba.~~ ~~calabris.~~ N.Y. B.S. & C.

~~158~~ ~~alba.~~ ~~calabris.~~ N.Y. B.S. & C.

~~159~~ ~~alba.~~ ~~calabris.~~ N.Y. B.S. & C.

~~160~~ ~~alba.~~ ~~calabris.~~ N.Y. B.S. & C.

~~161~~ ~~alba.~~ ~~calabris.~~ N.Y. B.S. & C.

~~162~~ ~~alba.~~ ~~calabris.~~ N.Y. B.S. & C.

~~163~~ ~~alba.~~ ~~calabris.~~ N.Y. B.S. & C.

~~164~~ ~~alba.~~ ~~calabris.~~ N.Y. B.S. & C.

1844 - 1845

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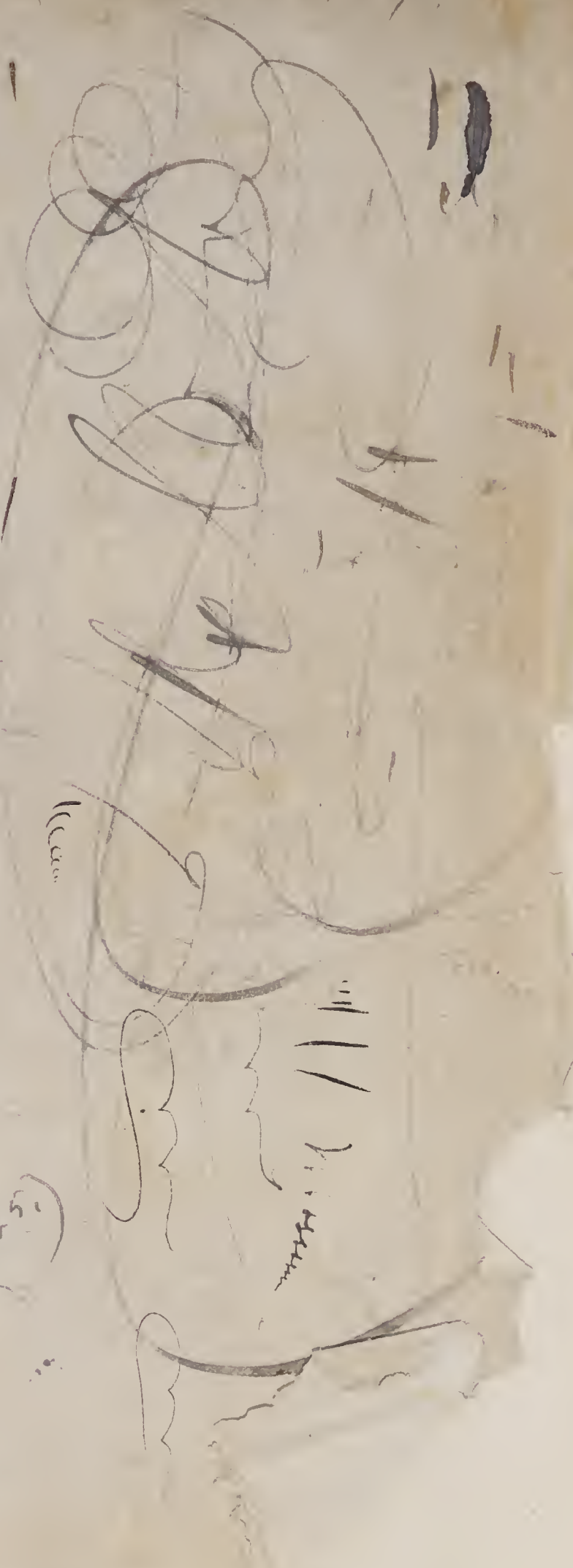
1844 - 1845

0 Cl  
124

August

Blue

127  
12  
12  
12  
12  
13  
13  
135  
136  
137  
250  
256  
306  
222  
423  
866  
853  
874  
655  
856  
242  
18



1st dinner at 5.00